

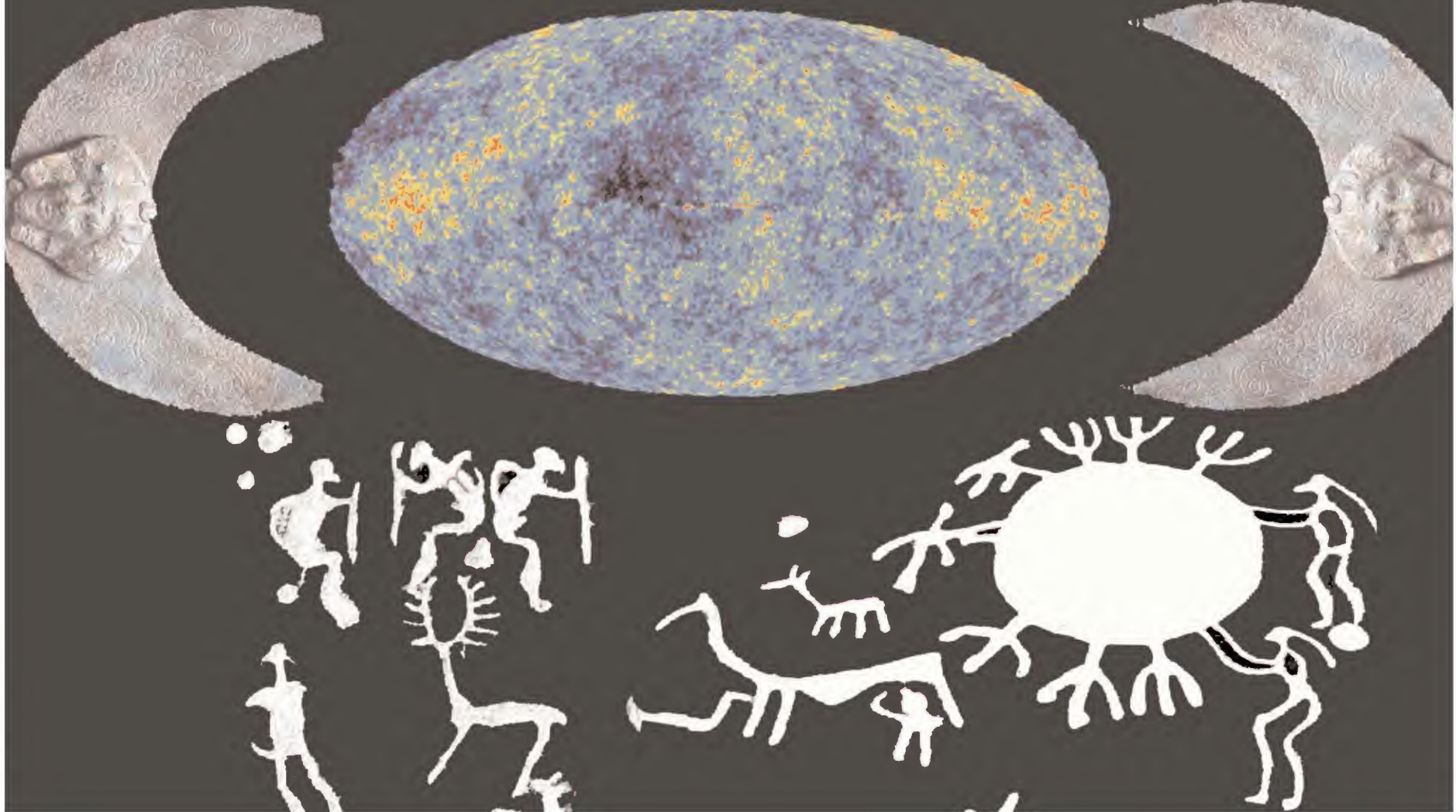
LA
GROTTE
DU

CLAUDE



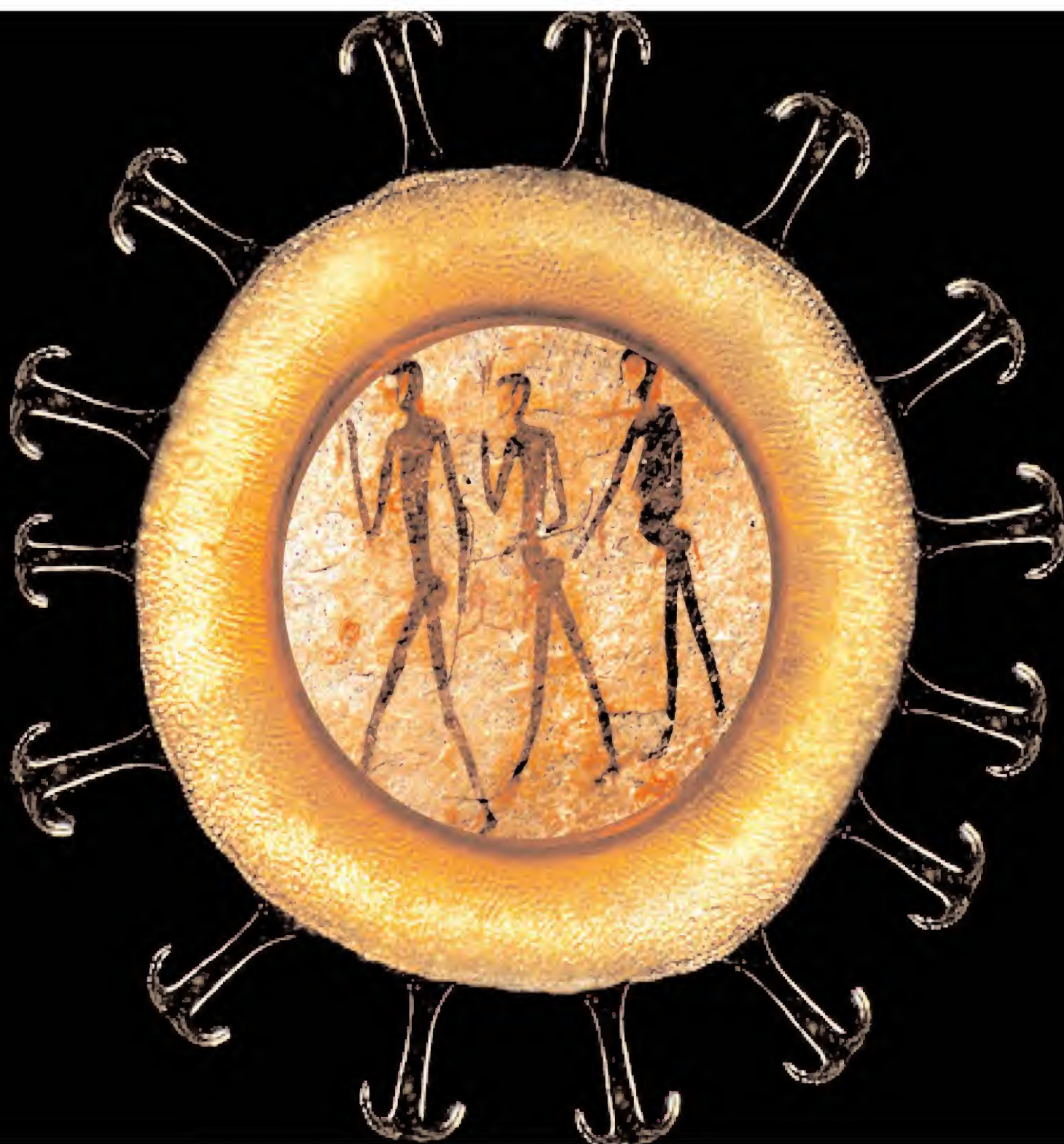
PRIMITIF
QUANTIQUE

PAQUET







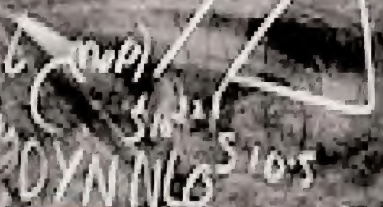


Bar...
SW 87

$$C(x, Q^2) = g_s \int \frac{d\omega}{\omega} C(\omega, Q^2)$$

$$125 < 127.5$$

$$125 \text{ GeV}$$



NLO + NNLL

NLO + NNLL

$$C(x, Q^2) + \alpha_s$$

$$C(x, Q^2) = C^{\text{int}}(x, Q^2)$$

$$+ g_s L$$

$$125 < \dots < 127.5$$

$$125 \pm 2 \text{ GeV}$$



$$d^2 \sigma(w, S^2) / (dw^2 d\ln w)$$

$$n^2 / h^2$$

$$125 \pm 2$$

$$\frac{d\sigma}{d\ln w} \sim \frac{1}{w} \frac{d\sigma}{d\ln w}$$

Bar...

SW 87

(re)

$$C(x, Q^2) = g_s \int_0^1 dx' C(x', Q^2)$$



$$= g_s \left[\frac{1}{2} + \frac{1}{2} \ln \left(\frac{Q^2}{\mu^2} \right) \right]$$

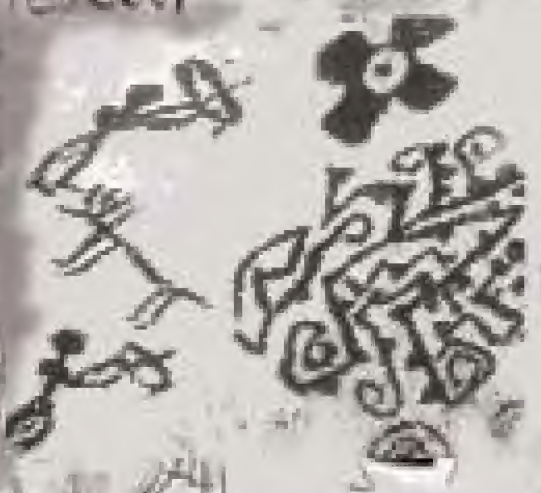
125C C123

DYNAMLO

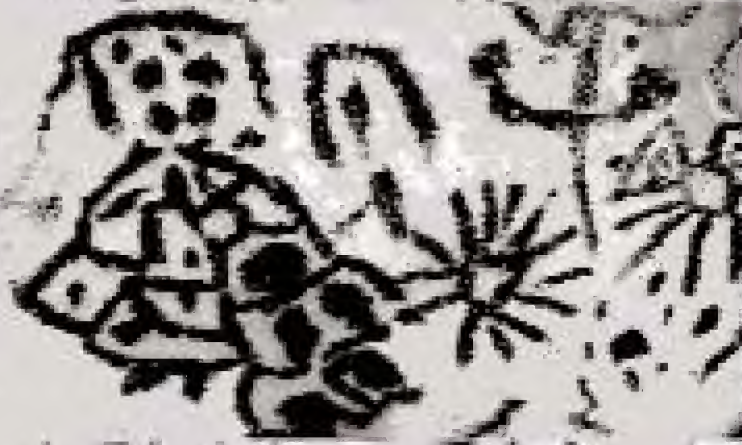
NLO = NNLO

1NLO

NNLO



191 101



125.2 GeV

125.2 GeV

11

125.2 GeV

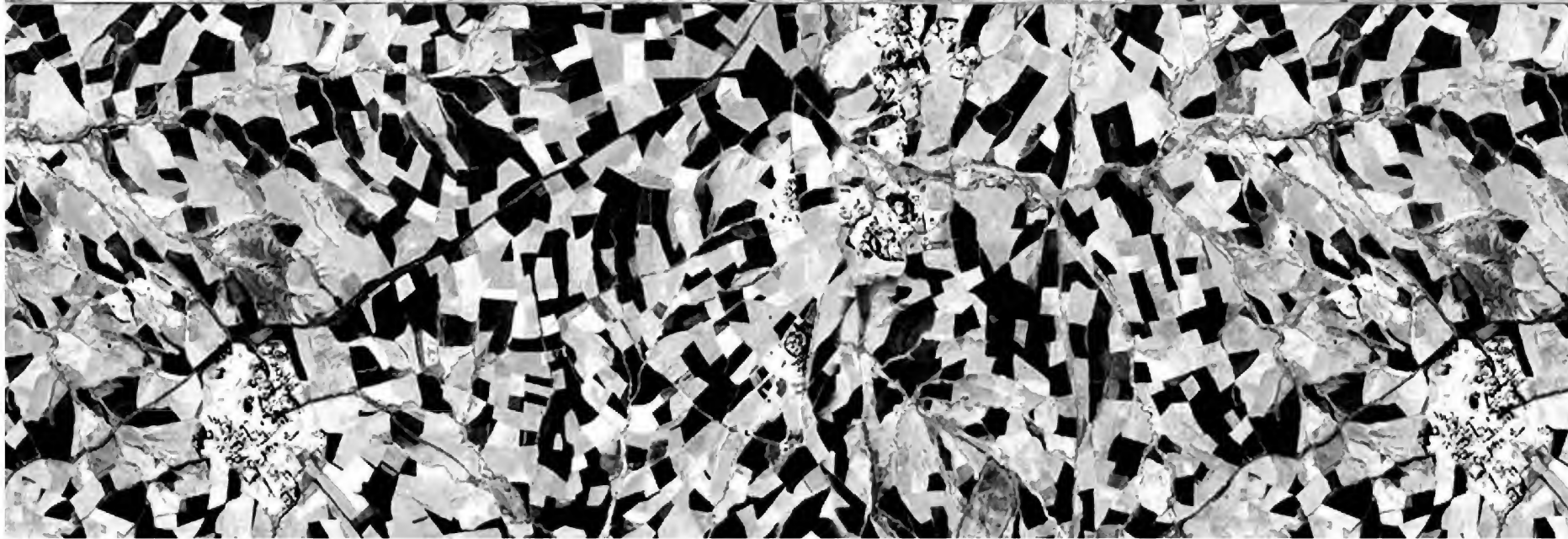
125.2 GeV

125.2 GeV

125.2 GeV

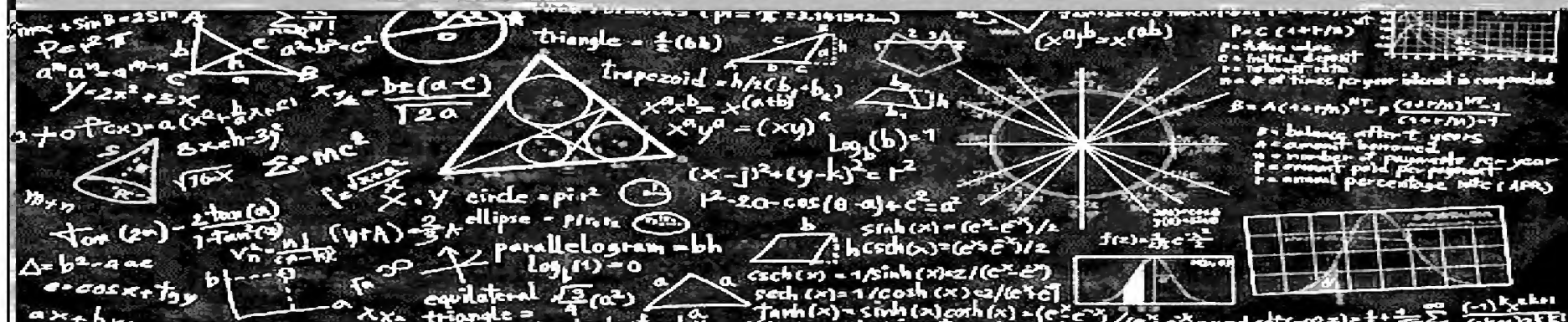
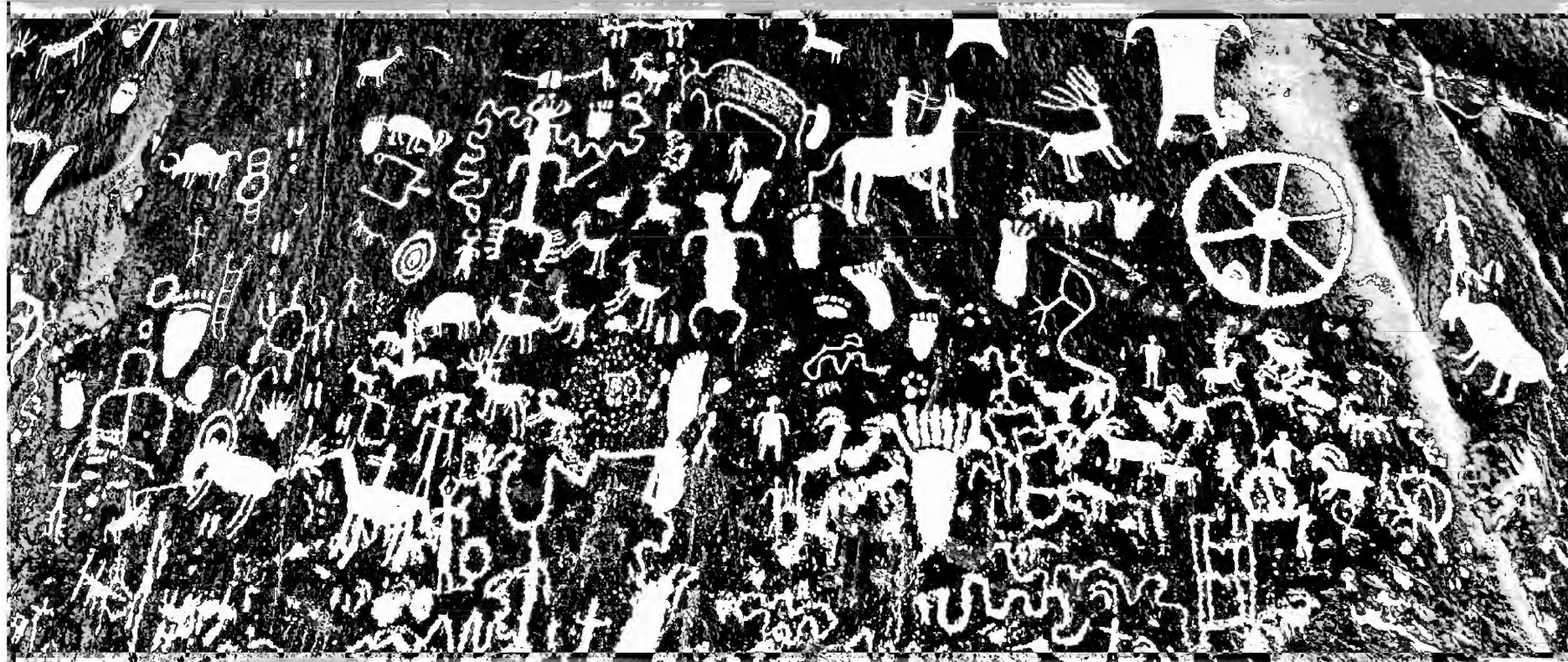
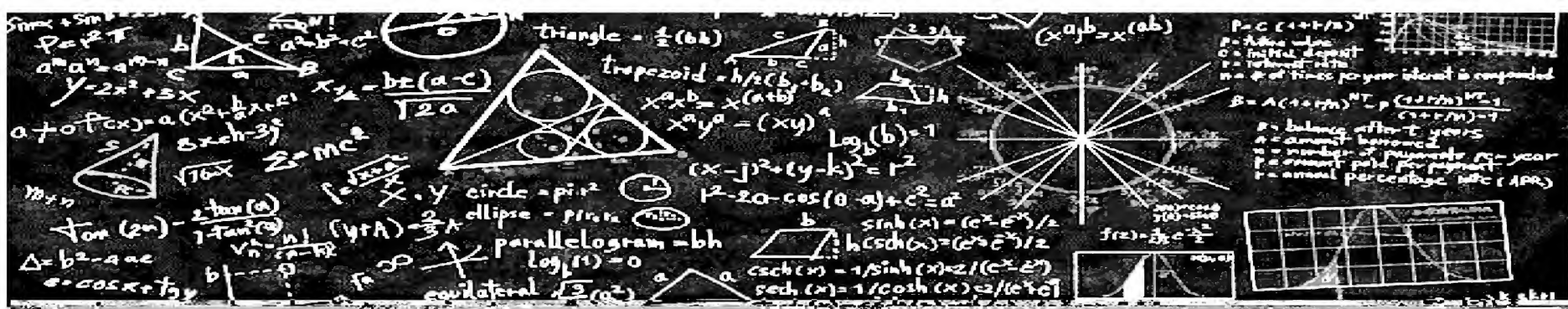
125.2 GeV

125.2 GeV



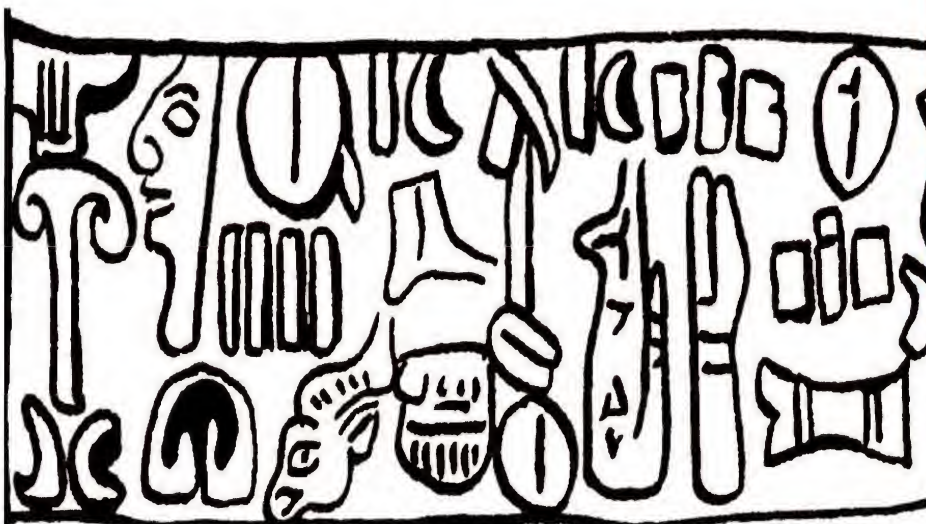


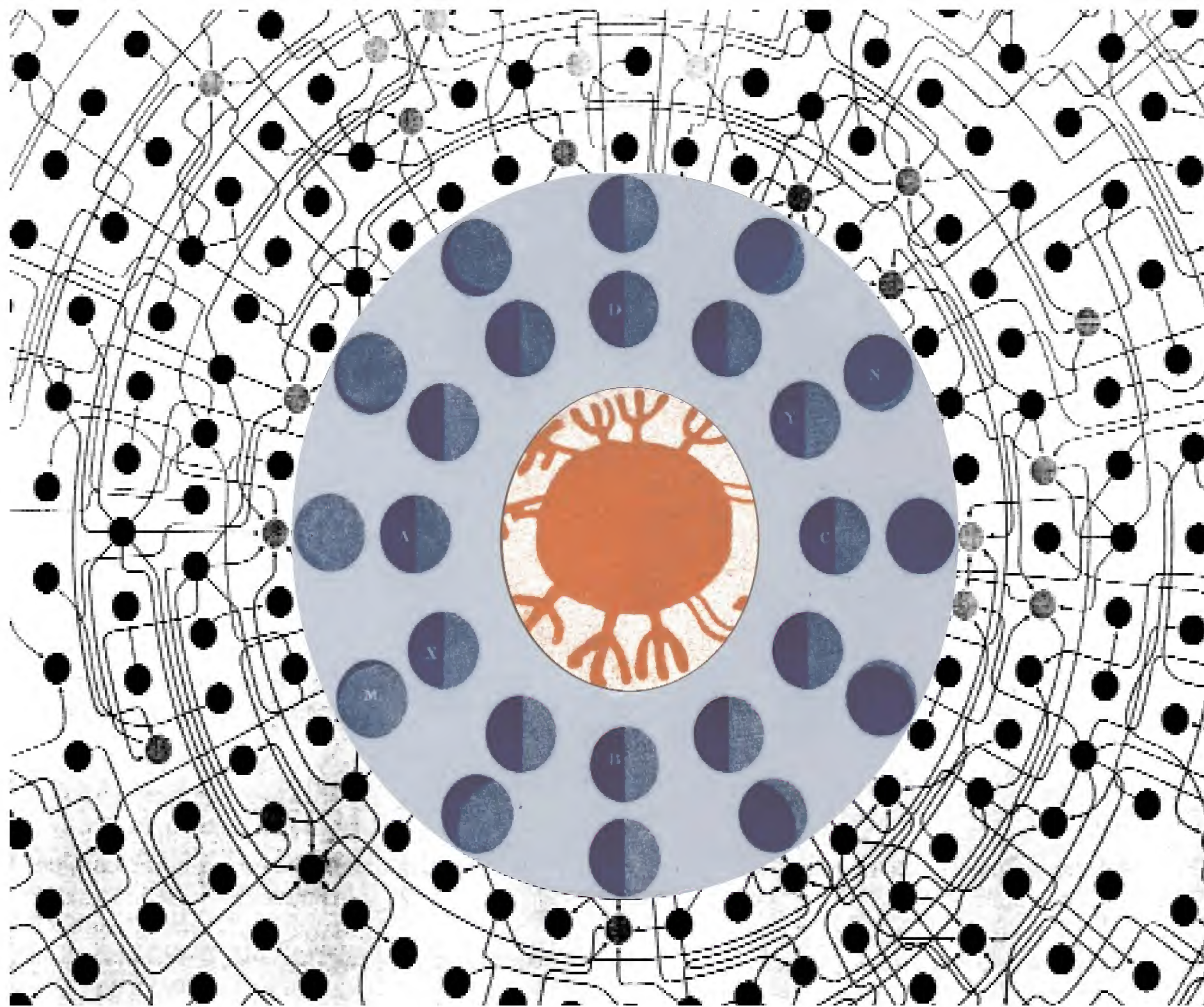










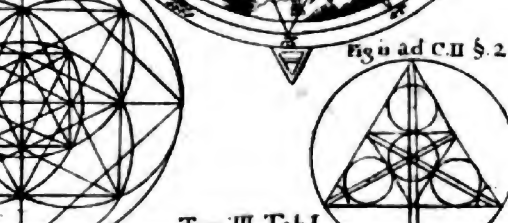
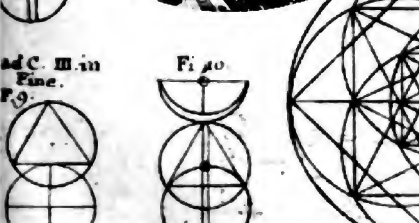
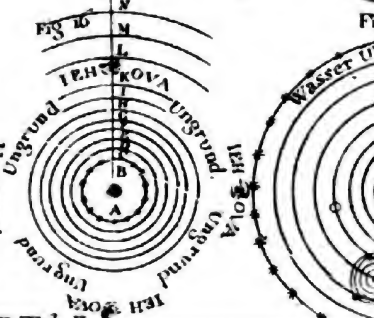
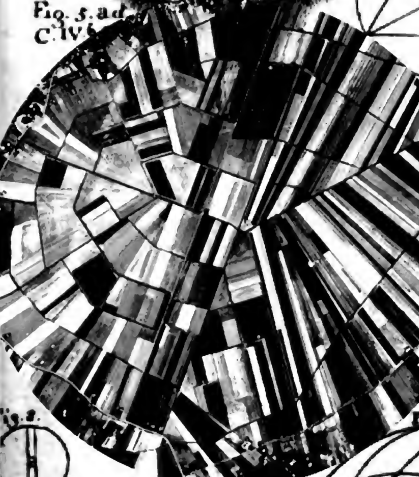
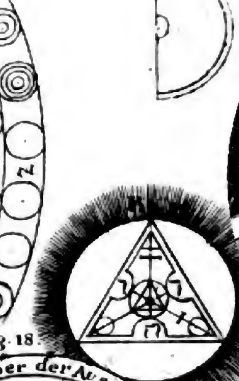
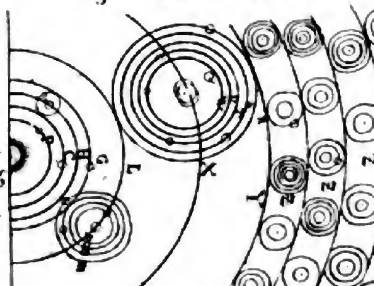
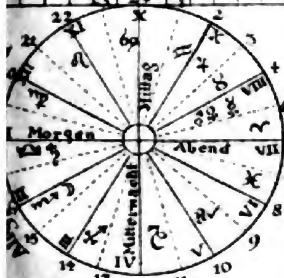
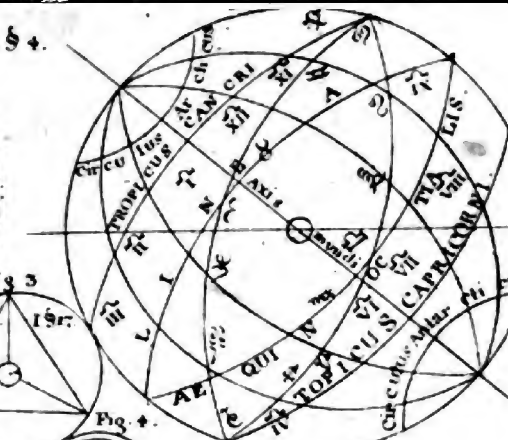
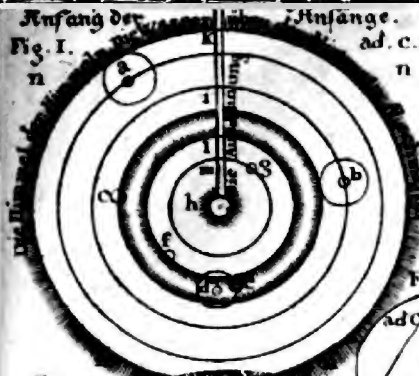
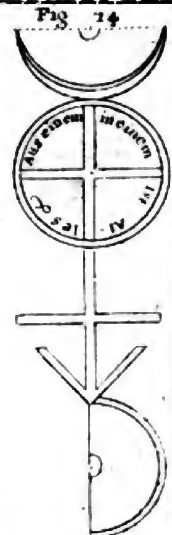
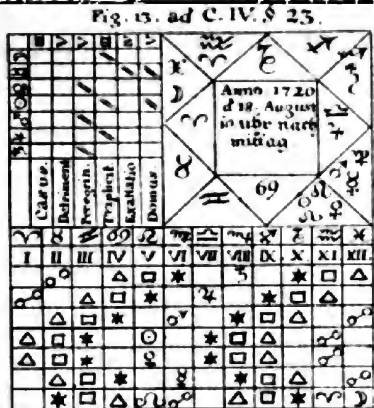
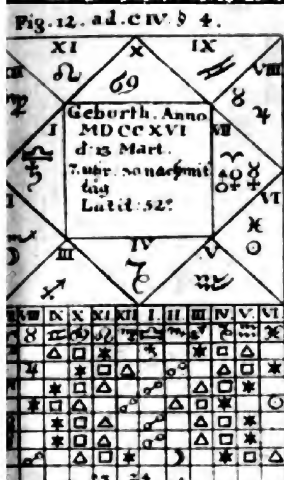


$$M_1 = A, B, \dots, E, z = \sqrt{4+4} = 2$$

$$d \ln M = 0 \quad H_5 = 1 + 4 + 3 + 4 + 5 + \dots$$

$$a_n = -\frac{1}{R} \left(\frac{1}{\ln R} \frac{d a_n}{d z} \right) = \frac{1}{R} \left(\frac{1}{\ln R} \frac{d a_n}{d z} \right)$$

$$\sum_{k=0}^{\infty} \frac{1}{k!} \ln t^k = \sum_{k=0}^{\infty} \frac{1}{k!} \ln t^k$$



$$[P_1, P_2] = (e^{i\theta_1} - e^{i\theta_2}) \bar{P}_1 + q$$

$$[P_1, P_2] = (e^{i\theta_1} - e^{i\theta_2}) \bar{P}_1 + q$$

$$[P_1, P_2] = (e^{i\theta_1} - e^{i\theta_2}) \bar{P}_1 + q$$

Handwritten mathematical and scientific notes on the left side of the page, including:

- Equations: $V = \sqrt{\frac{T}{P}}$, $a = \frac{V_0}{R}$, $y = x^2 - 4x + 5$, $-\frac{(-4) \pm \sqrt{(-4)^2 - 4(1)(5)}}{2(1)}$, $\frac{4 \pm \sqrt{16 - 20}}{2}$, $\frac{4 \pm \sqrt{4 - 20}}{2}$, $\frac{4 \pm \sqrt{4 - 20}}{2} = 1 - i$.
- Chemical structures: A skeletal structure of a molecule with a hydroxyl group (OH) and a nitrogen atom (N).
- Diagrams: A circuit diagram with a battery, a switch, and a light bulb. A graph showing a sine wave.

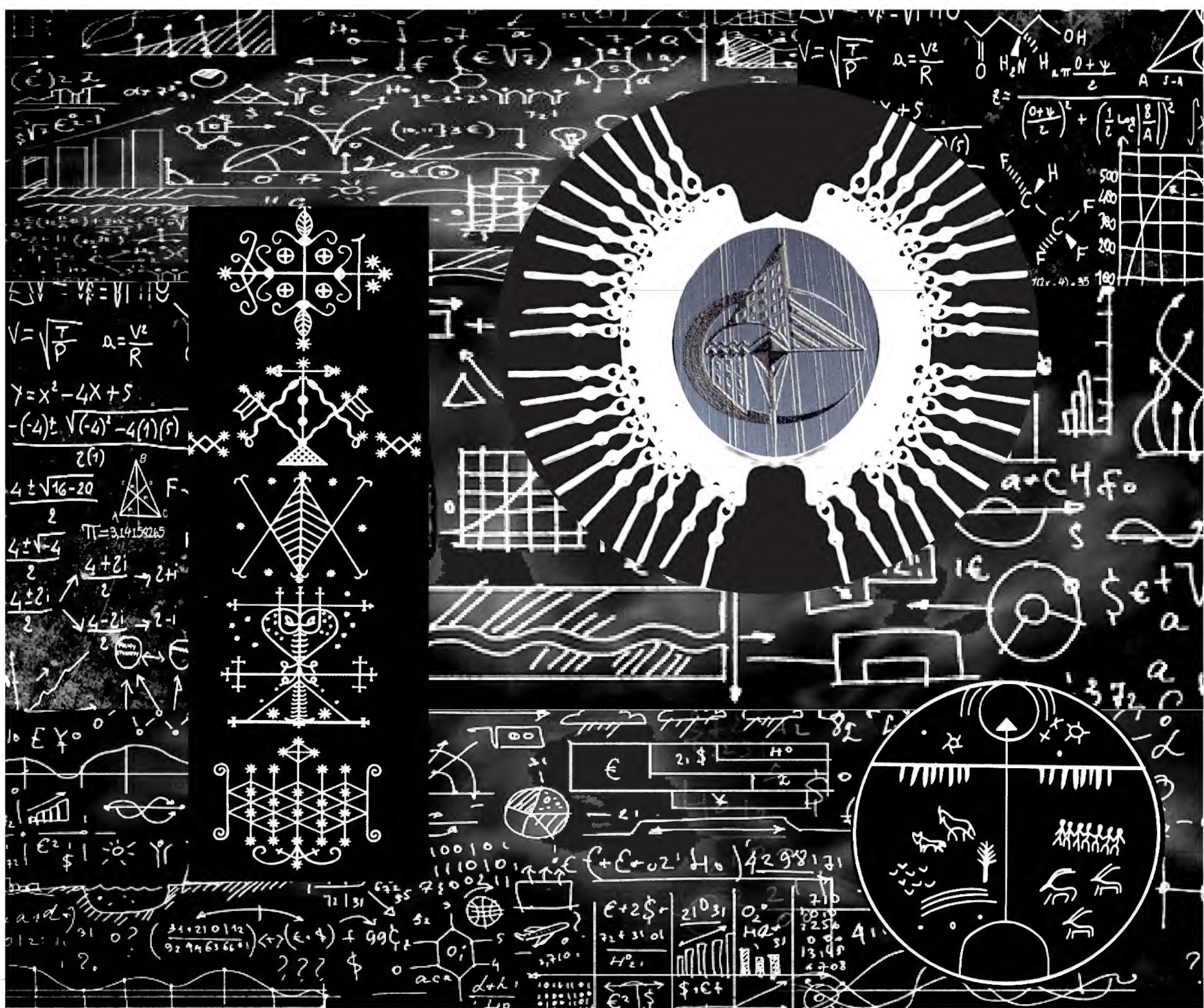
Handwritten mathematical and scientific notes in the center of the page, including:

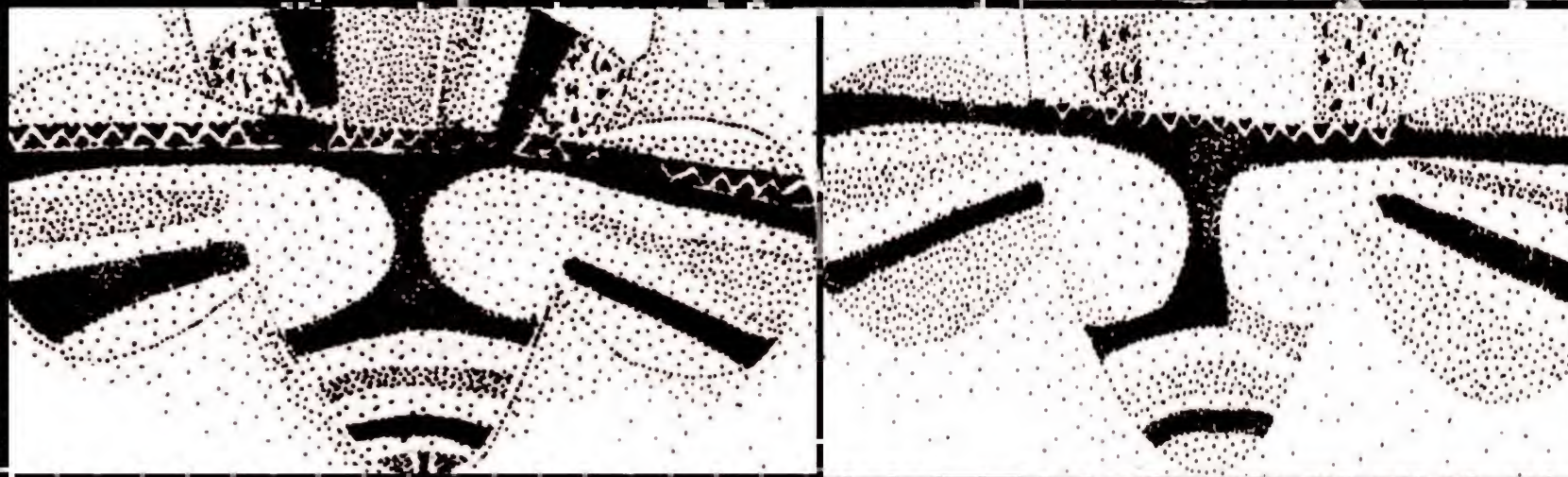
- Equations: $\frac{4 \pm \sqrt{4 - 20}}{2}$, $\frac{4 \pm \sqrt{4 - 20}}{2} = 1 - i$.
- Chemical structures: A skeletal structure of a molecule with a hydroxyl group (OH) and a nitrogen atom (N).
- Diagrams: A circuit diagram with a battery, a switch, and a light bulb. A graph showing a sine wave.

Handwritten mathematical and scientific notes on the right side of the page, including:

- Equations: $\frac{4 \pm \sqrt{4 - 20}}{2}$, $\frac{4 \pm \sqrt{4 - 20}}{2} = 1 - i$.
- Chemical structures: A skeletal structure of a molecule with a hydroxyl group (OH) and a nitrogen atom (N).
- Diagrams: A circuit diagram with a battery, a switch, and a light bulb. A graph showing a sine wave.

Handwritten mathematical notes and diagrams, including various equations and symbols, possibly related to algebra or calculus. The notes are dense and cover most of the page.





Virus Laboratory v.2.0
Virus Laboratory version 2.0 Is Written By [Damen].
Press The Number Of An Option To Change It.

[illegible]

[illegible]

$$\begin{aligned} \text{Trace}(AB) &= \text{Trace}(BA) \\ [\hat{L}_i, \hat{L}_j] &= i \hbar \epsilon_{ijk} \hat{L}_k \\ \hat{\mathbf{L}}(\mathbf{r}) &= \hat{\mathbf{Q}} \times \hat{\mathbf{P}} = -i \hbar \mathbf{r} \times \\ &= |\langle \beta | \alpha, t \rangle|^2 = \left| \sum_j w_j | \alpha_j, t \rangle \right|^2 \\ \sqrt{E/m} &= \sqrt{0.8186 \cdot 10^{-13}} \\ \varphi_{RG} &= \varphi_{\text{Einstein}} + \varphi_{\text{Newton}} \\ &= i \hbar \frac{d}{dt} |\psi(t)\rangle = \frac{\hat{p}^2}{2m} |\psi(t)\rangle \\ |\psi(t)\rangle &= \sum_i \sum_j c_{n,i} |\varphi_{n,i}\rangle \end{aligned}$$

$$A \cdot \Delta B \geq \frac{1}{2} \left| \left\langle \left[A, \hat{B} \right] \right\rangle_T - \hbar^2 \frac{\partial^2 \Psi(\vec{r}, t)}{\partial t^2} \right|$$

$$\hbar^2 \frac{\partial^2 \Psi(\vec{r}, t)}{\partial t^2} = -\hbar^2 c^2 \Delta \Psi(\vec{r}, t) + m^2 c^4 \Psi(\vec{r}, t)$$

$$R_{\mu\nu} - \frac{1}{2} g_{\mu\nu} R - \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu} \hbar^2 \frac{\partial^2 \Psi(\vec{r}, t)}{\partial t^2} = -\hbar^2 c^2 \Delta \Psi(\vec{r}, t) + m^2 c^4 \Psi(\vec{r}, t)$$

$$|\psi\rangle = \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix}_\epsilon = \begin{bmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{bmatrix} \cdot [|u_1\rangle \quad |u_2\rangle \quad \cdots \quad |u_N\rangle] \quad \langle\phi| = \begin{pmatrix} \phi_1 \\ \phi_2 \\ \vdots \\ \phi_N \end{pmatrix}_{\epsilon^*} = [\phi_1 \quad \phi_2 \quad \cdots \quad \phi_N] \cdot \begin{bmatrix} \langle u_1| \\ \langle u_2| \\ \vdots \\ \langle u_N| \end{bmatrix} = \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix}_\epsilon = \begin{bmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{bmatrix} \cdot [|u_1$$

$$\frac{1}{3} [\phi_1(r_1)\phi_2(r_2)\phi_2(r_3) + \phi_2(r_1)\phi_1(r_2)\phi_2(r_3) + \phi_2(r_1)\phi_2(r_1)\phi_1(r_3)]$$

初叙意者夫如來一字
塵其躰六塵之本法佛三密即日
一密遍法界而常恒五智四身具上
以悟者号大覺運者名衆生衆生

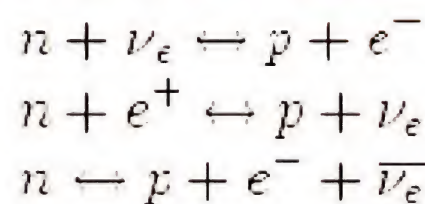


$$r_2)\phi_2(r_3) + \phi_2(r_1)\phi_1(r_2)\phi_2(r_3) + \phi_2(r_1)\phi_2(r_2)\phi_1(r_3)]$$

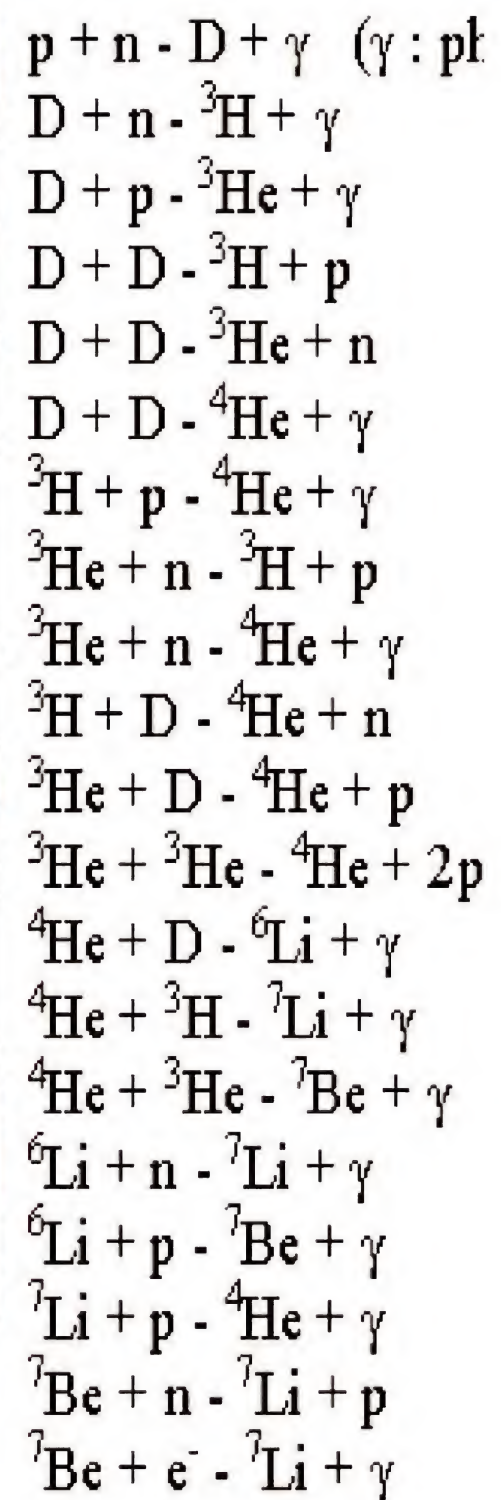
$$R - \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu} - \hbar^2 \frac{\partial^2 \Psi(\vec{r}, t)}{\partial t^2} = -\hbar^2 c^2 \Delta \Psi(\vec{r}, t) + m^2 c^4 \Psi(\vec{r}, t)$$

$$\hbar^2 \frac{\partial^2 \Psi(\vec{r}, t)}{\partial t^2} = -\hbar^2 c^2 \Delta \Psi(\vec{r}, t) + m^2 c^4 \Psi(\vec{r}, t)$$

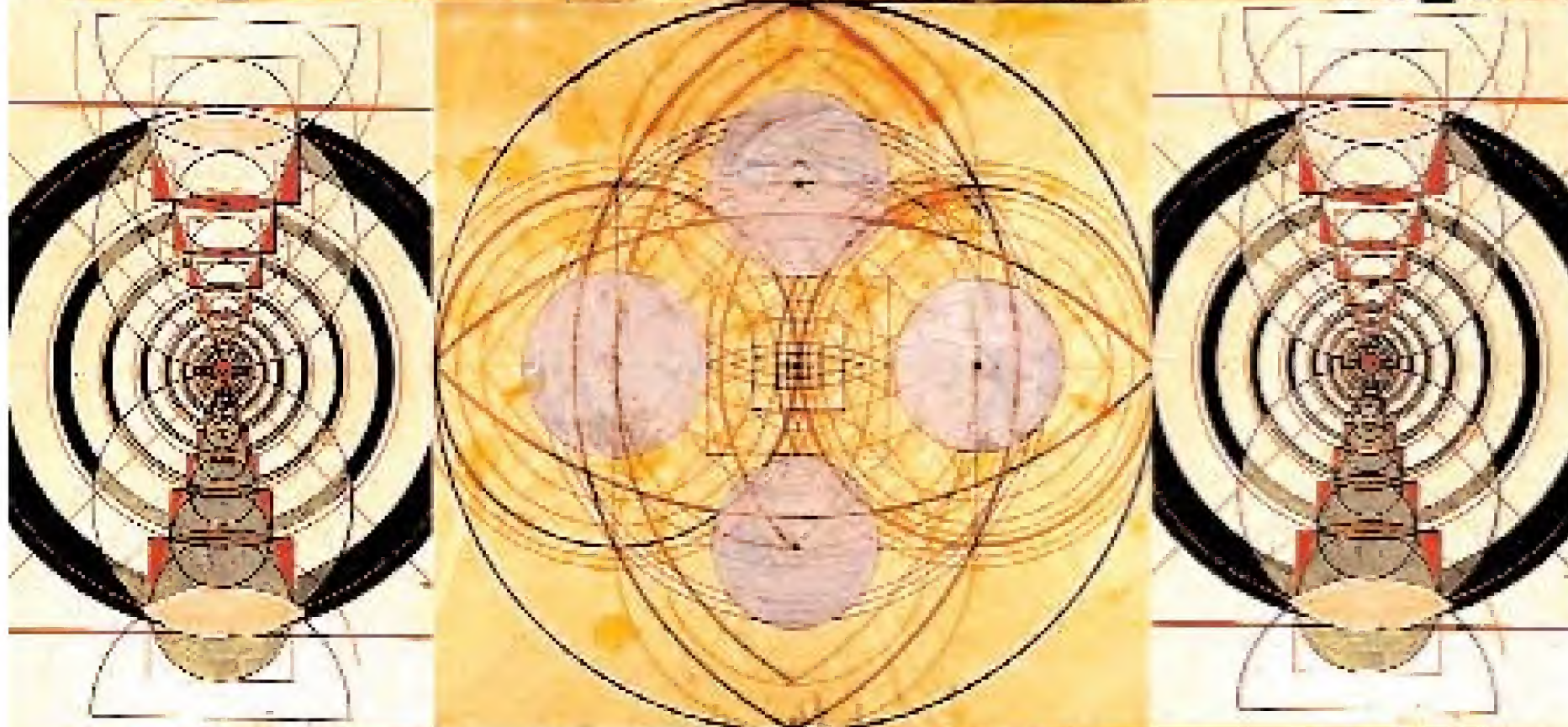
$$\langle\phi|\psi\rangle = \left(\begin{pmatrix} \phi_1 \\ \phi_2 \\ \vdots \\ \phi_N \end{pmatrix}_{\epsilon^*}, \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix}_\epsilon\right) = [\phi_1 \quad \phi_2 \quad \cdots \quad \phi_N] \cdot \begin{bmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{bmatrix} = \sum_{n=1}^N \phi_n \cdot \psi_n, \langle\phi| = \begin{pmatrix} \phi_1 \\ \phi_2 \\ \vdots \\ \phi_N \end{pmatrix}_{\epsilon^*} = [\phi_1 = \left(\begin{pmatrix} \phi_1 \\ \phi_2 \\ \vdots \\ \phi_N \end{pmatrix}_{\epsilon^*}, \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix}_\epsilon\right) =$$



$$\frac{n_p}{n_n} = e^{-\frac{E_p - E_n}{kT}} = e^{-\frac{\Delta mc^2}{kT}}$$







$$\mathbb{P}=\sigma T^{\frac{1}{\pi}}$$



$$H=\sum_k$$

$$\varphi^{Einstein}=\frac{6\,\pi\,G\,M_S}{c^2\,a\,(1-e^2)}$$

$$_k^{\dagger}a_k$$

$$\vec{F}_{12}=\Delta G\frac{m_1m_2}{d^2}\vec{u}_{12}$$

$$\Delta\varphi=\varphi_{exp}-\varphi_{RG}=\varphi_{Newton}$$



$$g(0)=a\;;\;g(n+1)=f(g(n))y=g(x)\;??\;|\;[a(l,0)=a\;??\;i<x\hat{a}(l,i+1)=f(a(l,i))\;??\;y=\hat{a}(l,x)]$$

$$\frac{24\,\pi^3\,a^2}{T^2\,c^2\,(1-e^2)}$$



$$g(0)=a\;;\;g(n+1)=f(g(n))y=g(x)\;??\;|\;[\hat{a}(l,0)=a\;??\;i<x\hat{a}(l,i+1)=f(\hat{a}(l,i))$$

$$\lambda_{max}=\frac{hc}{1,965\cdot kT}=\frac{hc}{15\cdot kT}=\frac{18\cdot 10^{-3}}{2,898\cdot 10^{-3}}T$$

$$\frac{hc}{15\cdot kT}=\frac{18\cdot 10^{-3}}{2,898\cdot 10^{-3}}T$$

$$R_{\mu\nu}-\frac{1}{2}g_{\mu\nu}R-\Lambda\,g_{\mu\nu}=\frac{8\pi G}{c^4}$$

$$\lambda=\frac{n}{p}$$

$$\begin{array}{l} ?xA? ?xB? ?x(A?B)\;;\;?x?yA(x,y)\;?N\;?z\;?x?z\;?y?z\;A(x,y)\;;\;?xA\\ ?\;?yB\;? ?x?y\;(A?B)\;;\;?x?z\;?y\;A(x,y)\;?N? \;u\;?x?z\;?y?u\;A(x,y). \end{array}$$

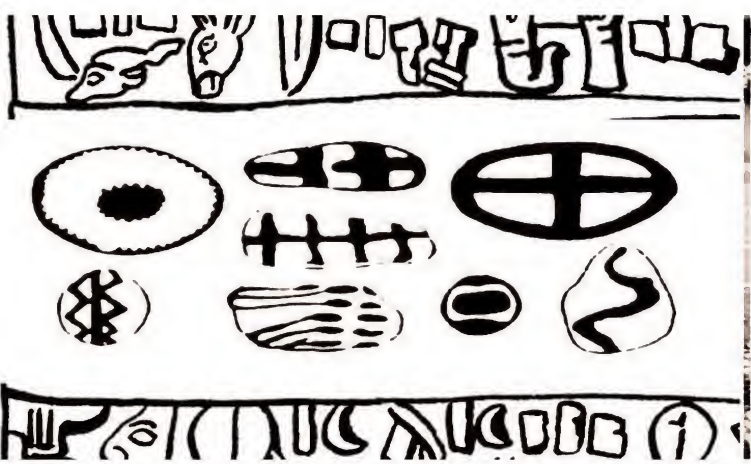


$$g(0)=a\;;\;g(n+1)=f(g(n))y=g(x)\;??\;|\;[\hat{a}(l,0)=a\;??\;i<x\hat{a}(l,i+1)=f(a(l,i))\;??\;y=\hat{a}(l,x)]$$

$$\pm\,0.45$$

$$\pm\,0.45$$

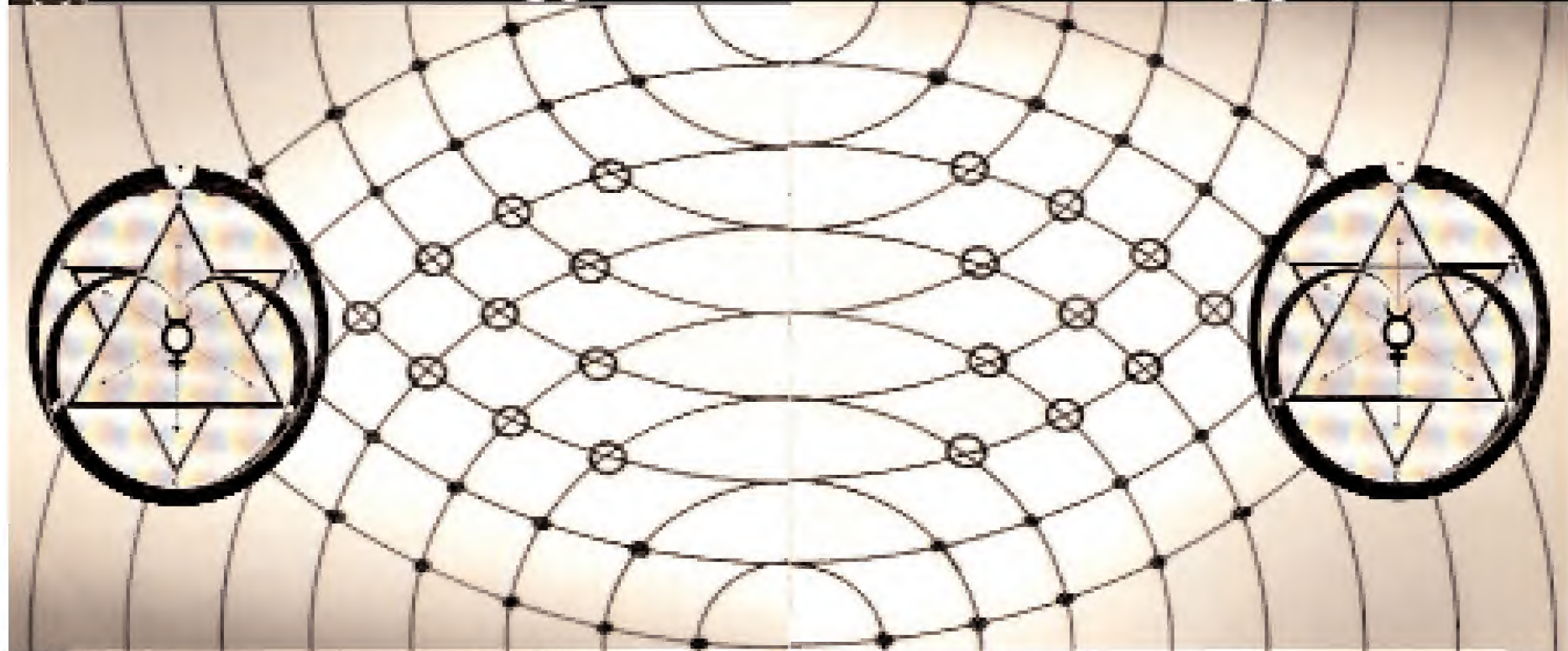
$$\lambda_{max}=\frac{hc}{4,965\cdot kT}=\frac{2,898\cdot 10^{-3}}{T}$$



$$\hbar^2 \frac{\partial^2 \Psi(\vec{r}, t)}{\partial t^2} - \hbar^2 c^2 \Delta \Psi(\vec{r}, t) + m^2 c^4 \Psi(\vec{r}, t) = \hbar^2 \frac{\partial^2 \Psi(\vec{r}, t)}{\partial t^2} - \hbar^2 c^2 \Delta \Psi(\vec{r}, t) + m^2 c^4 \Psi(\vec{r}, t)$$

$$|\psi\rangle = \begin{pmatrix} \langle \phi_1 | \\ \langle \phi_2 | \\ \vdots \\ \langle \phi_N | \end{pmatrix} \cdot \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix} = |\phi_1 \phi_2 \dots \phi_N| \cdot \begin{bmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{bmatrix} = \sum_{i=1}^N \phi_i \cdot \psi_i |\phi_i\rangle = \begin{pmatrix} \phi_1 \\ \phi_2 \\ \vdots \\ \phi_N \end{pmatrix} \cdot \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix}$$

$$H |\psi(t)\rangle = i\hbar \frac{\partial}{\partial t} |\psi(t)\rangle \quad H |\psi(t)\rangle = i\hbar \frac{\partial}{\partial t} |\psi(t)\rangle$$

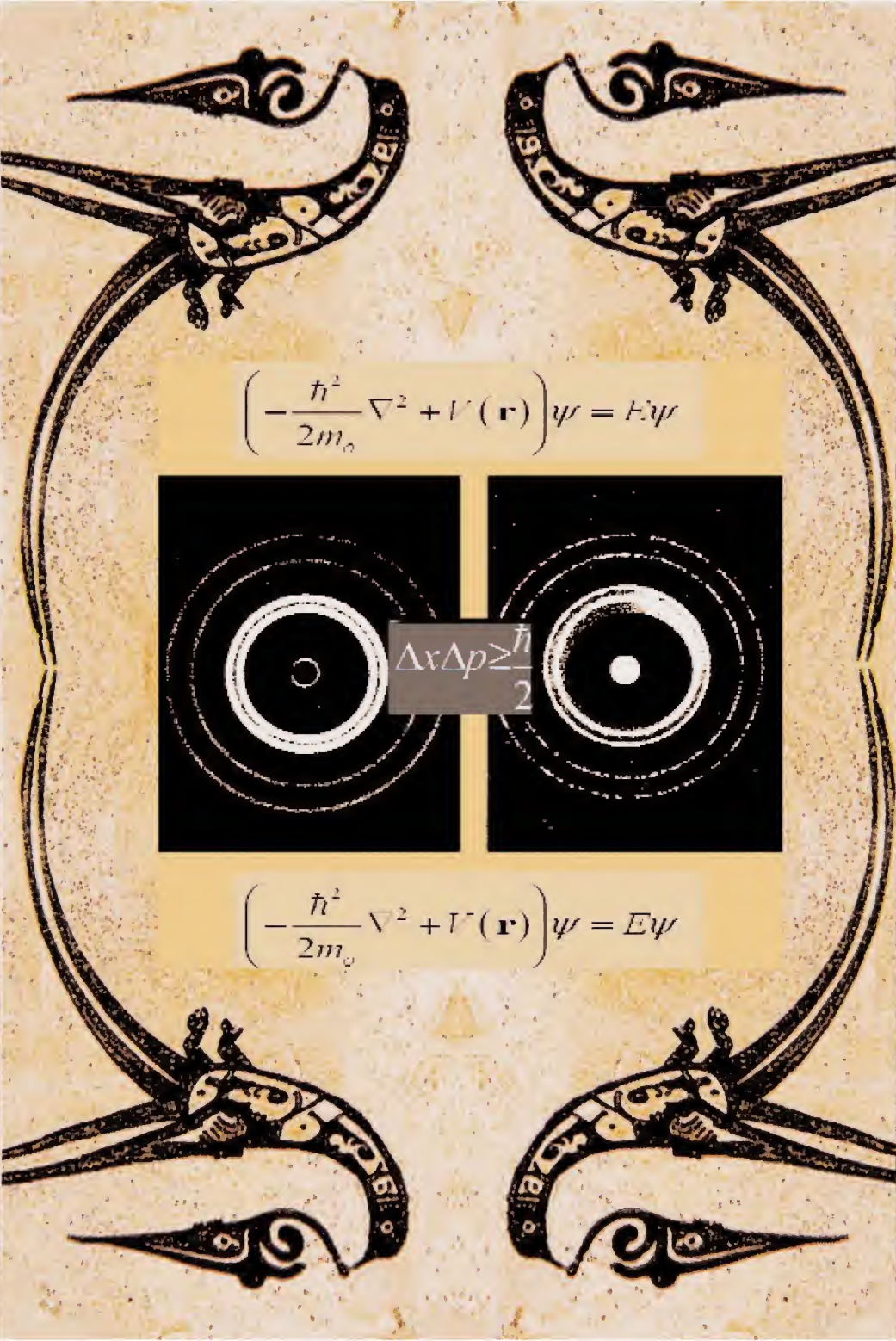


$$H |\psi(t)\rangle = i\hbar \frac{\partial}{\partial t} |\psi(t)\rangle \quad H |\psi(t)\rangle = i\hbar \frac{\partial}{\partial t} |\psi(t)\rangle$$

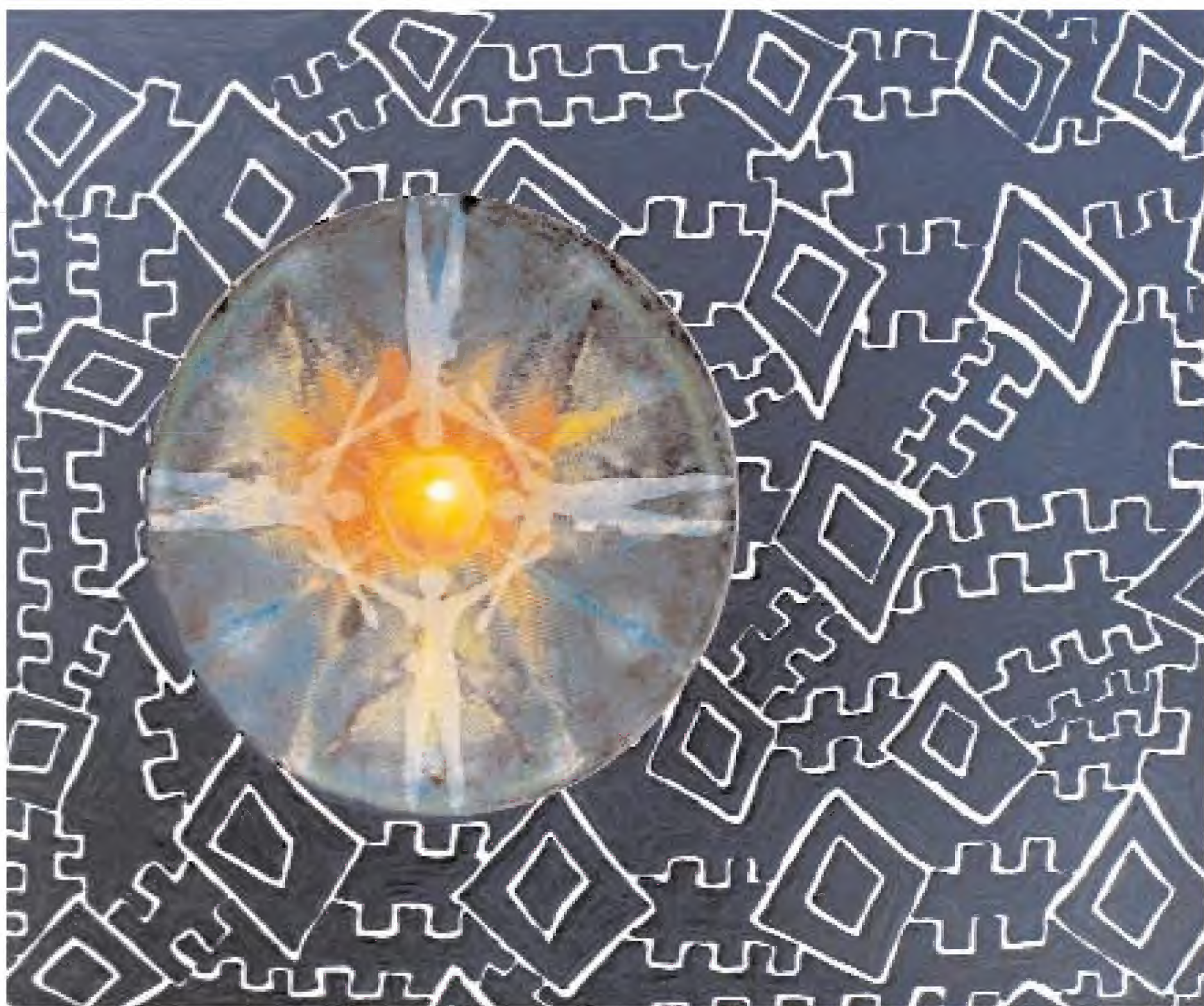
$$|\psi\rangle = \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix} \cdot \begin{bmatrix} \phi_1 \\ \phi_2 \\ \vdots \\ \phi_N \end{bmatrix} = |\phi_1 \phi_2 \dots \phi_N| \cdot \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix} = |\phi_1 \phi_2 \dots \phi_N| \cdot \begin{bmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{bmatrix} = \begin{pmatrix} \phi_1 \\ \phi_2 \\ \vdots \\ \phi_N \end{pmatrix} \cdot \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix}$$

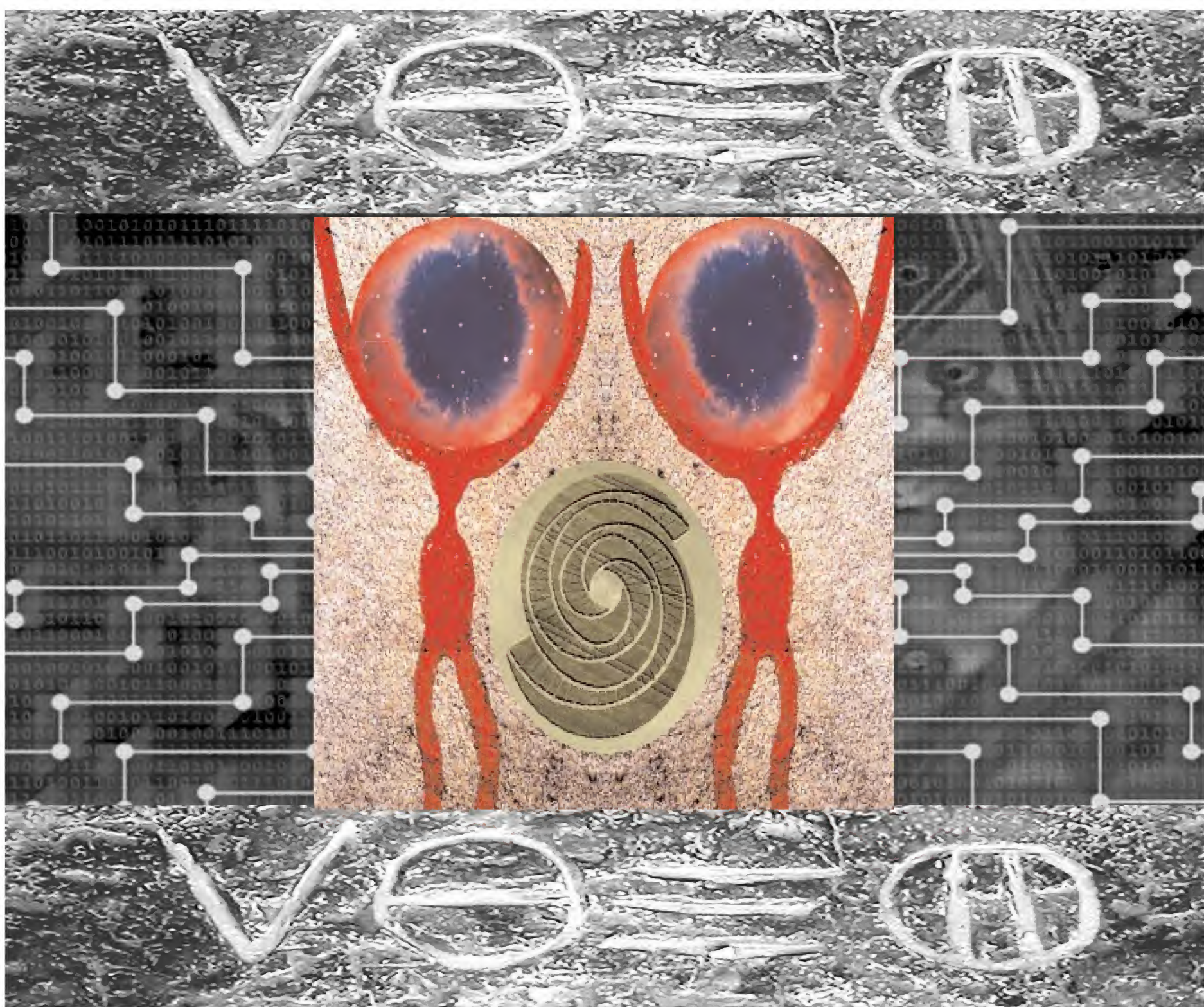
$$R_{\mu\nu} = \frac{1}{2} g_{\mu\nu} R - \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu} \hbar^2 \frac{\partial^2 \Psi(\vec{r}, t)}{\partial t^2} = -\hbar^2 c^2 \Delta \Psi(\vec{r}, t) + m^2 c^4 \Psi(\vec{r}, t)$$

Handwritten text in a cursive script, likely a historical form of Hebrew or Arabic, running vertically along the left margin of the page.

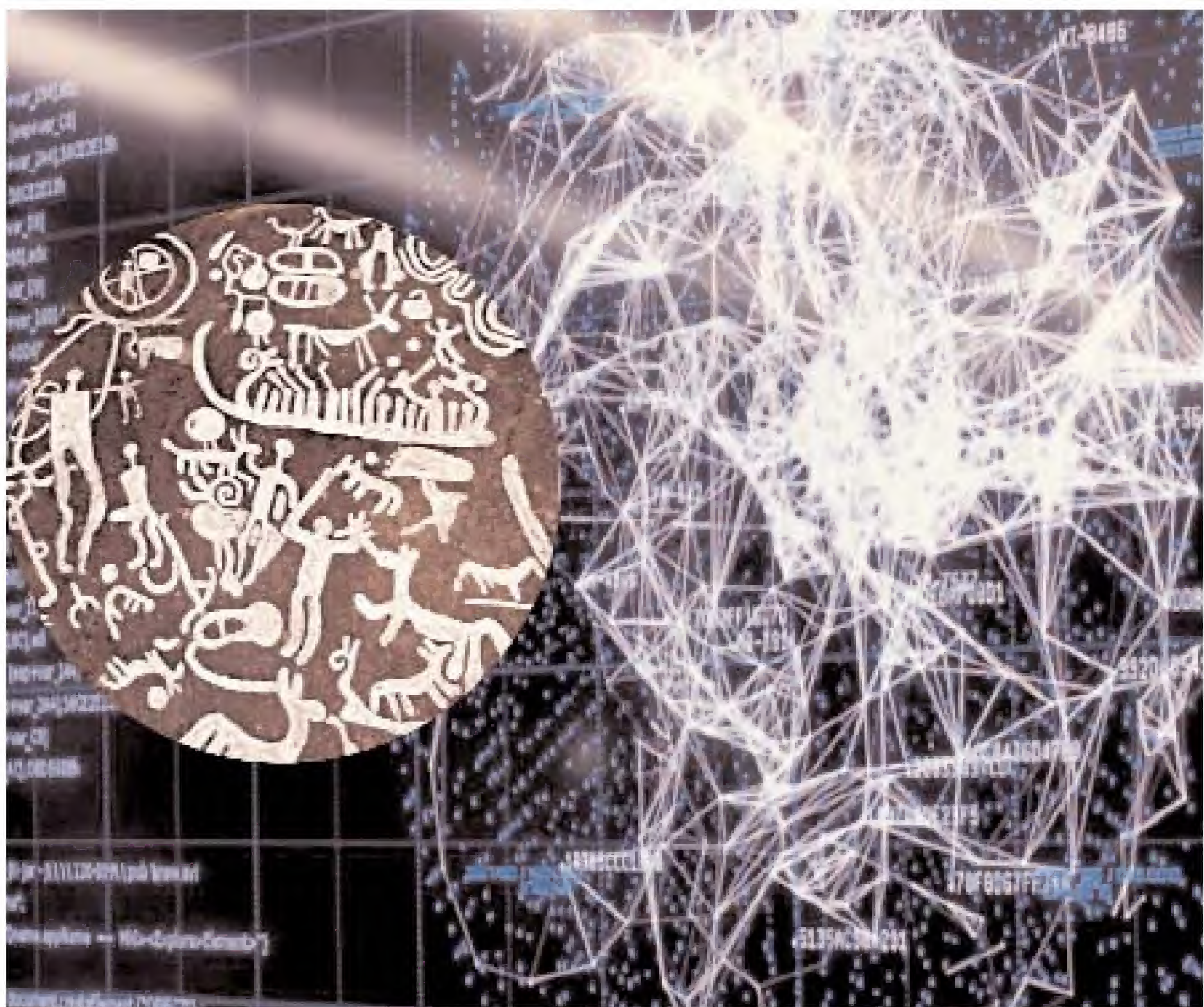


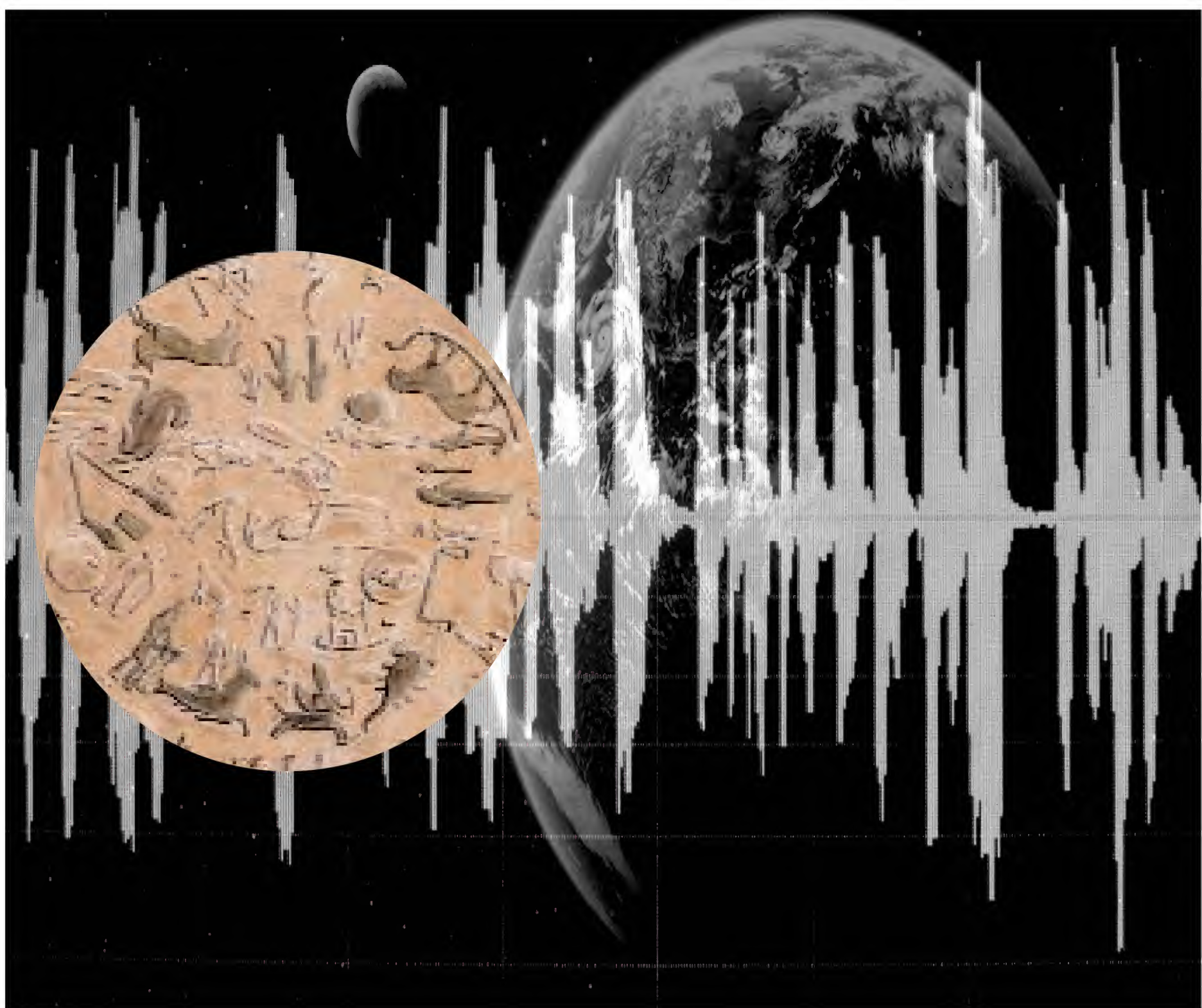
Handwritten text in a cursive script, likely a historical form of Hebrew or Arabic, running vertically along the right margin of the page.











$$Y_{i+1} = Y_i + h \cdot K_i$$

$$B = \begin{pmatrix} 2 & 1 & -1 & 0 \\ 3 & 0 & 1 & 2 \end{pmatrix}$$

$$(x_j - y_j)^2 \quad y_j = \frac{\sin x}{1 - y_j^2} \quad y_j' = \frac{\sin x}{\cos x}$$

$$\begin{aligned} \lambda x - y + z &= \\ x + \lambda y + z &= \\ x + y + z &= \end{aligned}$$

$$\text{radr} \left| \frac{d_k}{d\varphi} \right|$$

$$\lim_{n \rightarrow \infty} \frac{\sqrt{n^2 + 1} + n}{3\sqrt{3n^2 + 2n} - 1}$$

$$\frac{a}{\sin \alpha} = \frac{b}{\sin \beta} = 44$$



$$y = \sqrt{3x+1}$$

$$P_1 = \sqrt{10/16} \quad \begin{matrix} 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 \end{matrix} \quad C = \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$$

$$a^2 + b^2 = c^2 \quad \lambda, \beta, \gamma \in \mathbb{C}$$

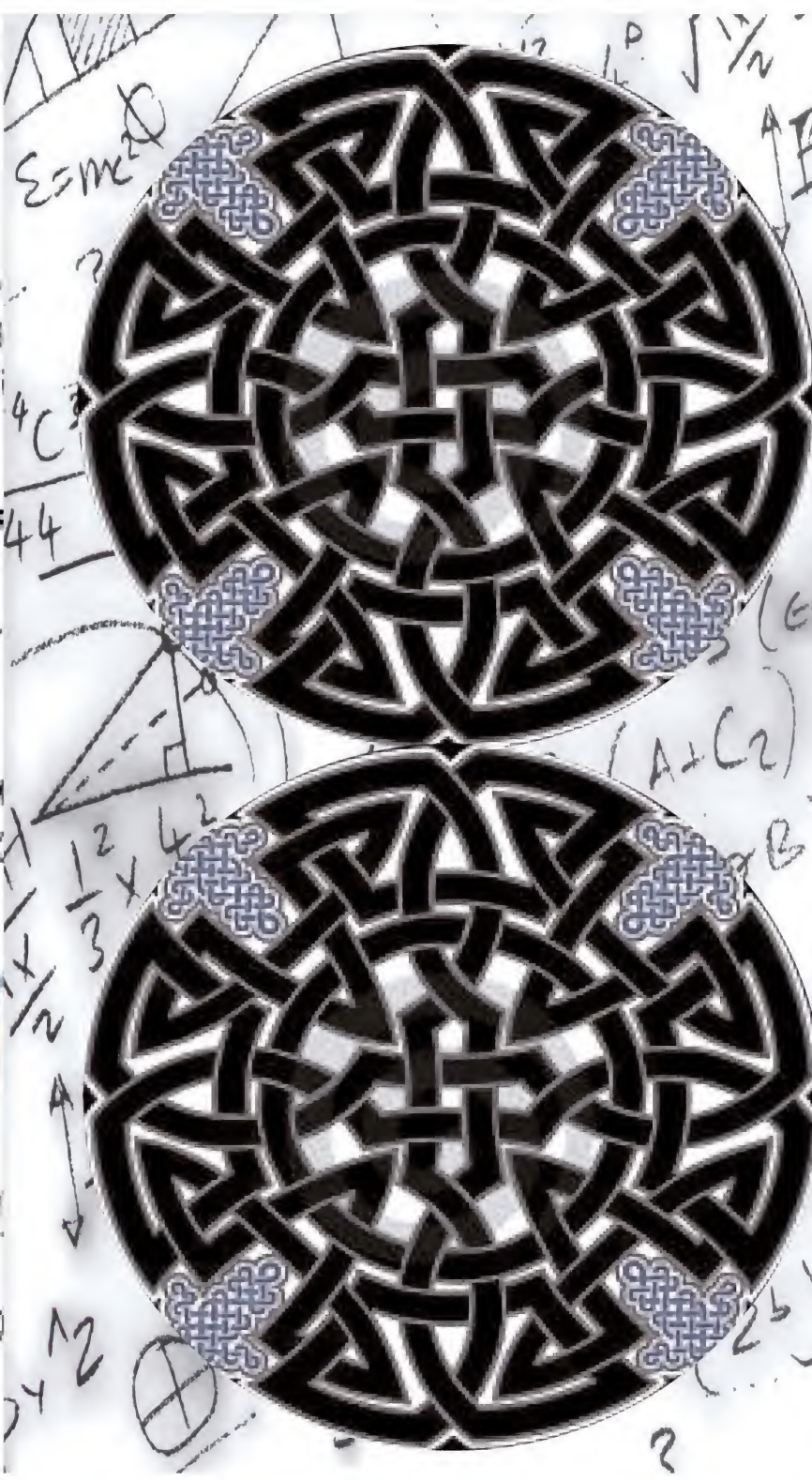
$$f(x) = 2^{-x} + 1, \epsilon = 0.005$$

$$e^2 - x y z = e; A(0, e, 1)$$

$$\lim_{x \rightarrow 0} \frac{a^{2x} - 1}{5x} = \frac{2}{5}$$

$$k|A| \neq 0; p \neq 0$$

$$+16\sqrt{3} \cdot 42 > 0$$



$$B = \begin{pmatrix} 2 & 1 & -1 & 0 \\ 3 & 0 & 1 & 2 \end{pmatrix}$$

$$Y_{i+1} = Y_i + h \cdot K_i$$

$$(x_j - y_j)^2 \quad y_j = \frac{\sin x}{1 - y_j^2} \quad y_j' = \frac{\sin x}{\cos x}$$

$$\begin{aligned} \lambda x - y + z &= \\ x + \lambda y + z &= \\ x + y + z &= \end{aligned}$$

$$\text{radr} \left| \frac{d_k}{d\varphi} \right|$$

$$\lim_{n \rightarrow \infty} \frac{\sqrt{n^2 + 1} + n}{3\sqrt{3n^2 + 2n} - 1}$$

$$\frac{a}{\sin \alpha} = \frac{b}{\sin \beta} = 44$$



$$y = \sqrt{3x+1}$$

$$P_1 = \sqrt{10/16} \quad \begin{matrix} 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 \end{matrix} \quad C = \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$$

$$a^2 + b^2 = c^2 \quad \lambda, \beta, \gamma \in \mathbb{C}$$

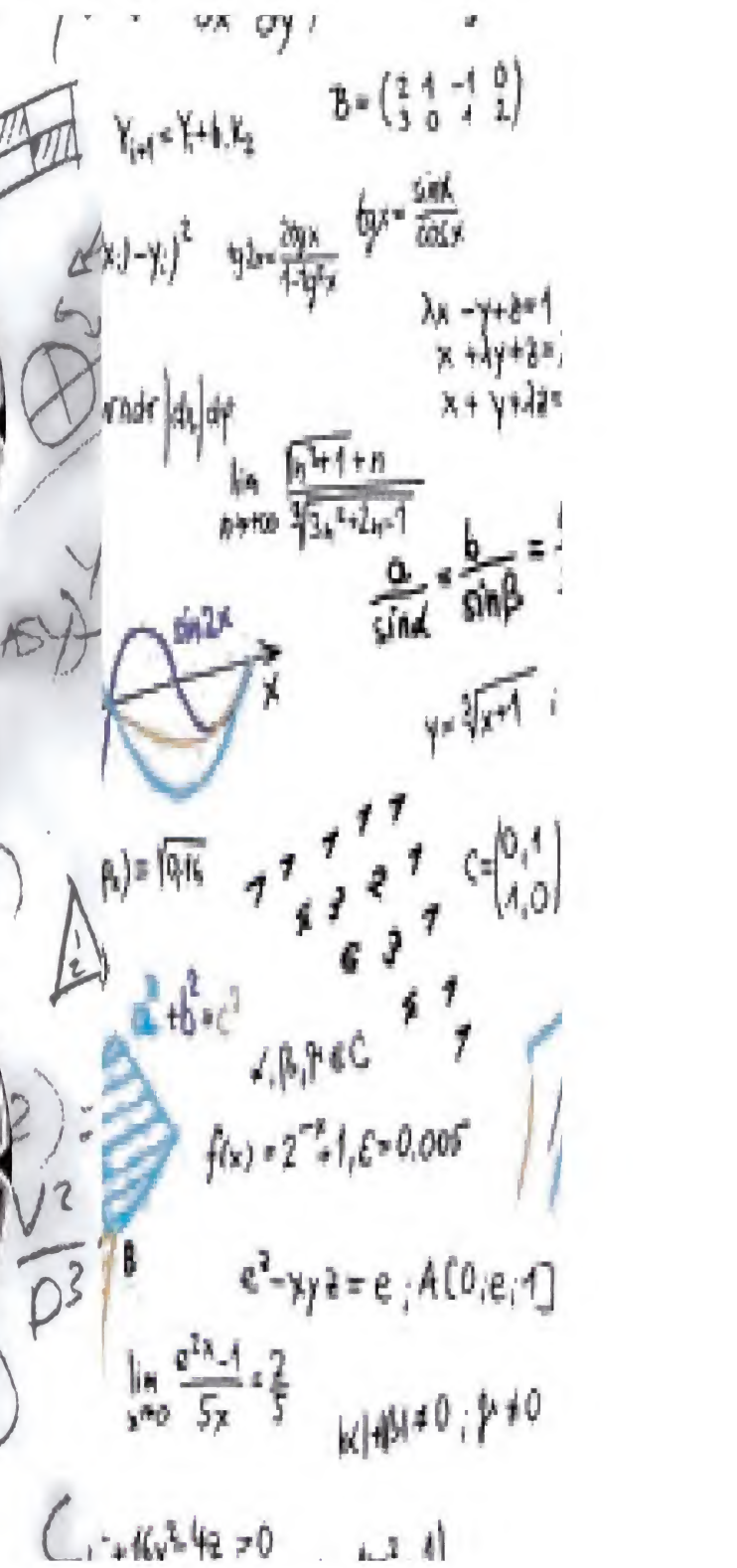
$$f(x) = 2^{-x} + 1, \epsilon = 0.005$$

$$e^2 - x y z = e; A(0, e, 1)$$

$$\lim_{x \rightarrow 0} \frac{a^{2x} - 1}{5x} = \frac{2}{5}$$

$$k|A| \neq 0; p \neq 0$$

$$+16\sqrt{3} \cdot 42 > 0$$



$$r = \sin \theta \quad \text{for } 0 \leq \theta \leq \pi/2 \quad (1, 2) \quad (1, 3) \quad (1, 4) \quad 0 \leq \theta \leq \pi/2 \rightarrow (3)$$

$$P_2(V_1 - V_2) = P_2(V_2 - V_1)$$

$$dV = - \left(\frac{P}{r^2} \right) dr$$

$$R(T_2 - T_1) = -nR \cdot \left[\frac{P_2 V_1}{nR} - \frac{P_2 V_2}{nR} \right]$$



θ	r
$\pi/6$	$-1/2$
$4\pi/3$	$-\sqrt{3}/2$

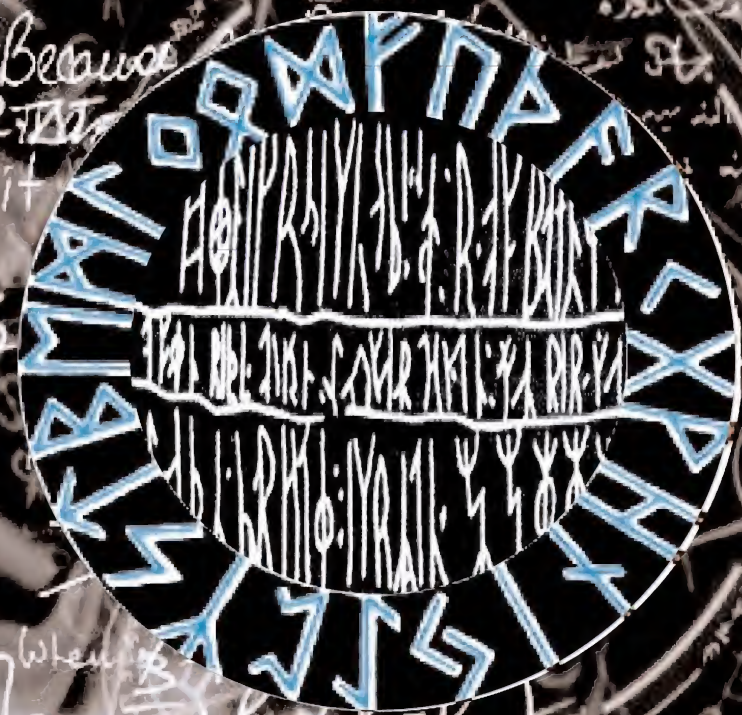
$$R(T_3 - T_2) = \frac{3}{2} nR \left[\frac{P_2 V_1}{nR} - \frac{P_2 V_2}{nR} \right]$$

$$r = \cos \theta \quad \text{for } 0 \leq \theta \leq \pi/2$$

$$\Delta V - W = \int_{V_1}^{V_2} P dV$$

$$= \frac{1}{2} P_2 (V_1 - V_2)$$

Because



When

$$r = \cos \theta \quad \text{for } \pi/2 \leq \theta \leq \pi$$

$$y = 5$$

$$5 = A_1 - B_1$$



$$r = \sin \theta \quad \text{for } 0 \leq \theta \leq \pi/2: \quad (1, \pi/2), (1/2, \pi/2) \quad 0 \leq \theta \leq \pi/2$$

$$\frac{1}{2} (V_1 - V_2) = \underline{\underline{P_2 (V_2 - V_1)}}$$

$$dv = - \frac{1}{r^2} \left(\frac{1}{r} \right) dr = - \frac{1}{r^3} dr$$

$$2 (T_2 - T_1) = - \kappa R \cdot \left[\frac{1}{r^2} \right]_{r_1}^{r_2} = \frac{2}{r_1^2} - \frac{2}{r_2^2}$$

$$r = \sin \theta$$



θ	r
$\pi/6$	$1/2$
$\pi/3$	$\sqrt{3}/2$

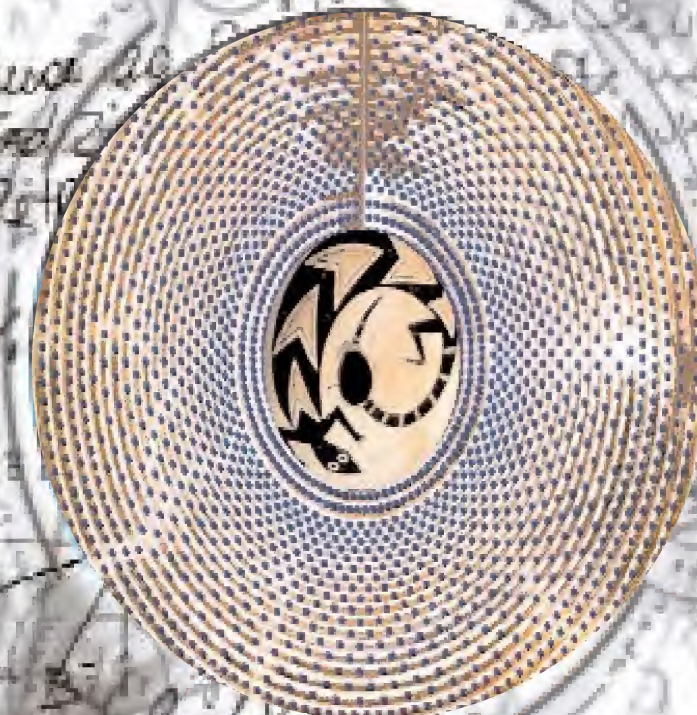
$$\kappa R (T_2 - T_1) = \frac{3}{2} \kappa R \left[\frac{1}{r^2} \right]_{r_1}^{r_2}$$

$$r = \cos \theta \quad \text{for } 0 \leq \theta \leq \pi/2$$

$$V - V_1 = \frac{1}{2} \kappa R (V_1 - V_2)$$

$$= \frac{1}{2} \kappa R (V_1 - V_2)$$

Because ρ is constant



$$Q = \frac{1}{2} \kappa R (V_1 - V_2)$$

$$S = A - 1$$



$$M = \frac{1}{n!} \left(\frac{1}{\omega} \frac{d}{dz} \right)^n \left(\frac{1}{\omega} \right) = \frac{1}{n!} \left(\frac{1}{\omega} \right) \left(\frac{1}{\omega} \right)^n$$

1000000
100 TeV

$$M_{ij} = A_{ij} B_{ij} \quad (B_{ij} \neq 0) \quad \text{by}$$

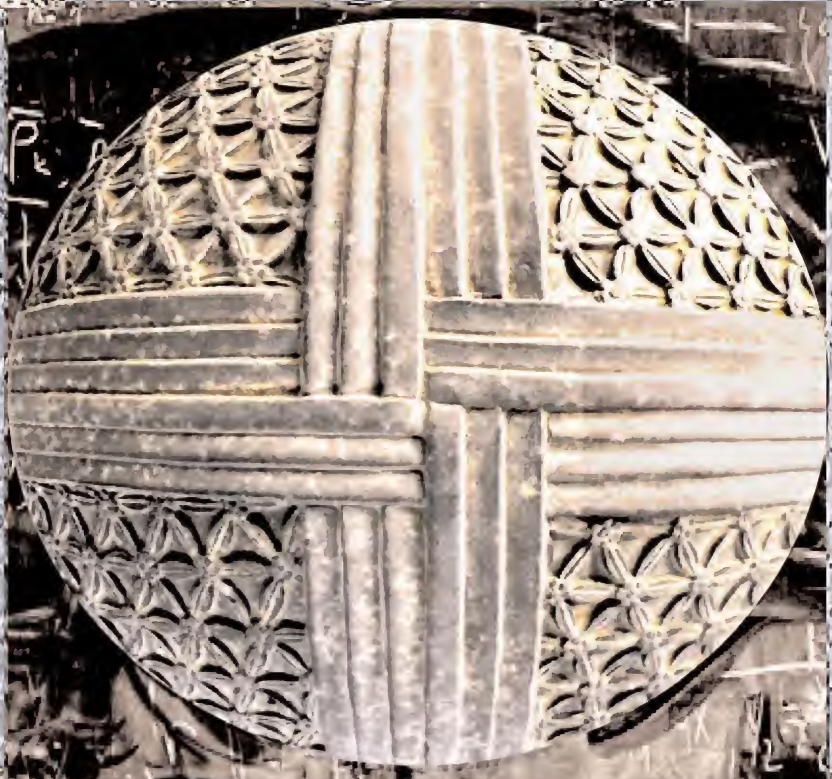
$$\det M = 0$$

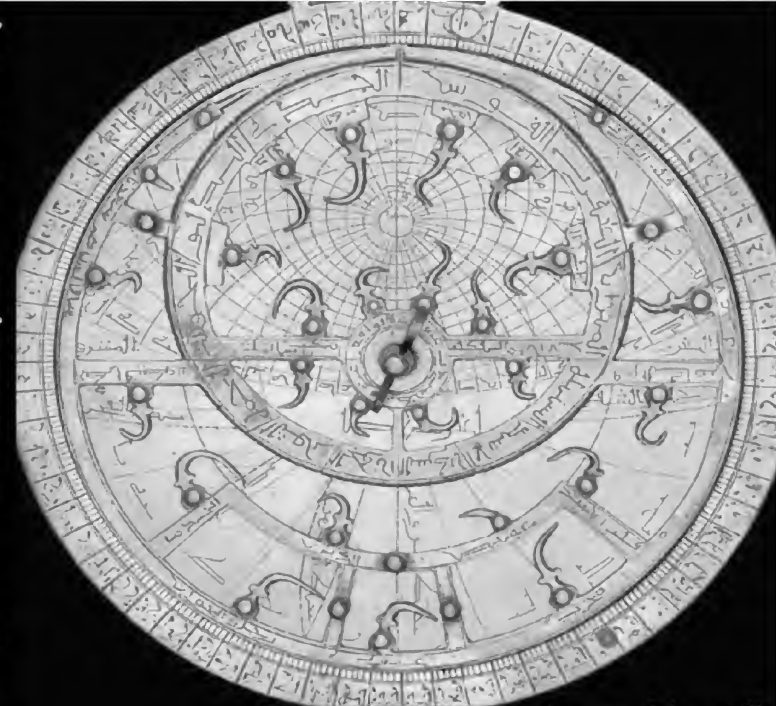
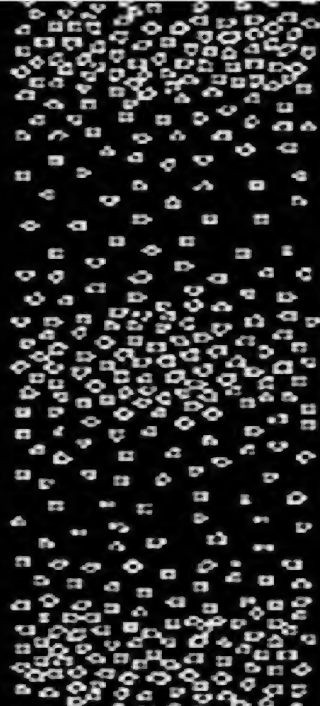
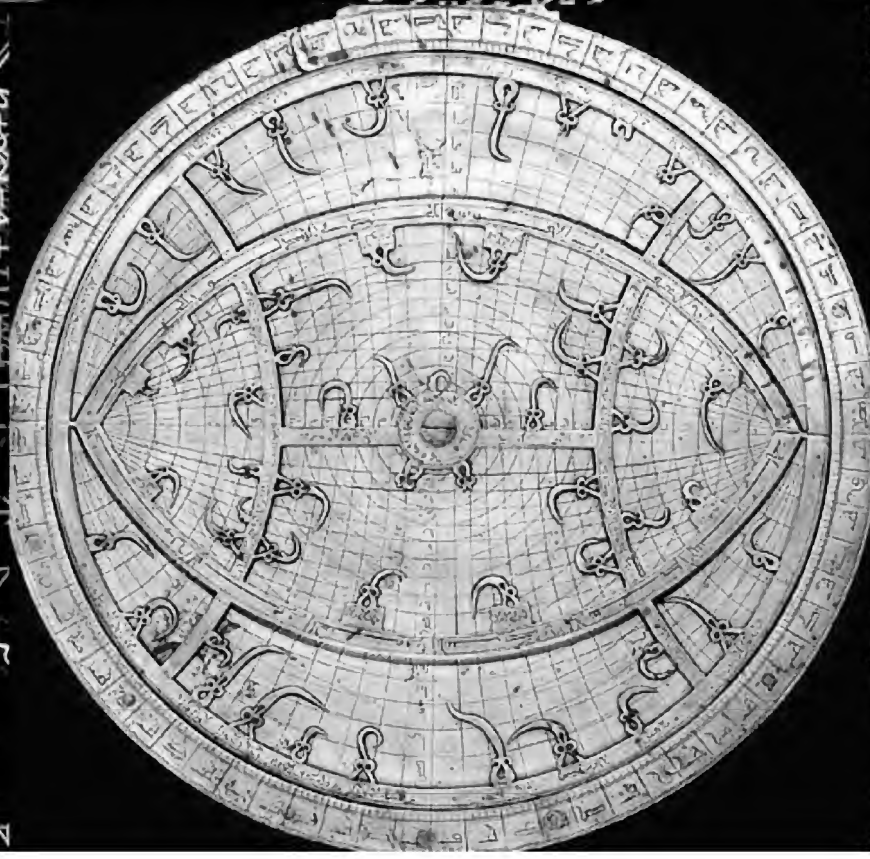
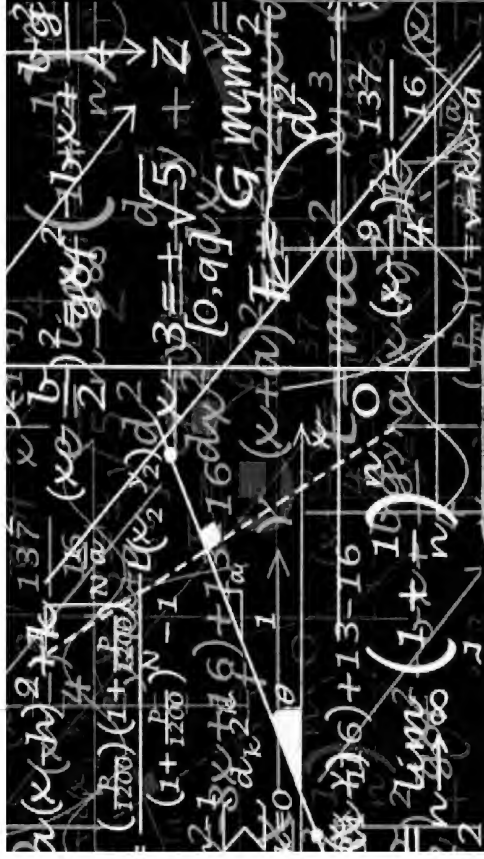
$$HS = 1 + 4t^2 + 9t^4 + \dots$$

$$f(t) = \frac{1}{(1-t)(1-t^2)(1-t^3)} = 1 + t + 2t^2 + 3t^3 + \dots$$

$$g(t) = \sum_{k=0}^{\infty} f(t^k)$$

$$1 \left(\begin{bmatrix} 1 & 1 \\ 2 & 1 \end{bmatrix} \right)_2 = \begin{bmatrix} 2 & 2 \\ 1 & 1 \end{bmatrix} + \begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$$



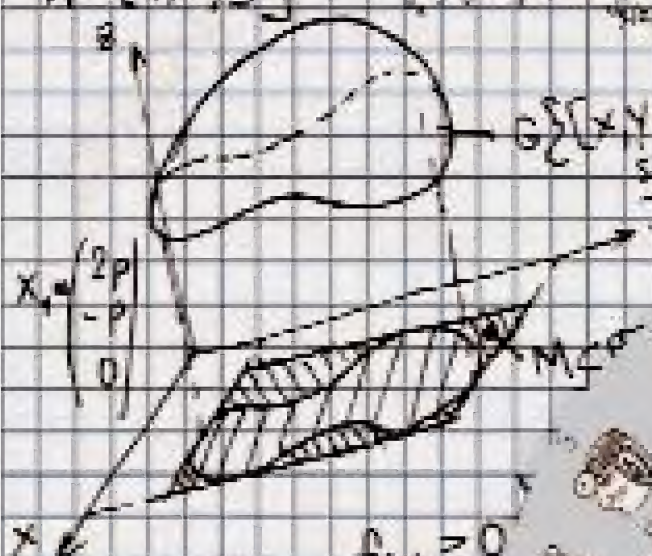


$$A = [1, 0, 3]$$

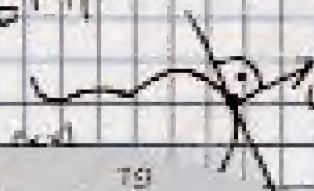
$$\int_{\gamma} \langle \mathbf{g}, d\mathbf{u} \rangle = \int_{\gamma} \langle \mathbf{T}(t) \rangle dt = \langle \mathbf{F}(\mathbf{u}) \rangle_{\gamma(t)}$$

$$\{[x, y] \in M, 0 \leq z = f(x, y)\}$$

$$\left(\frac{\partial \psi}{\partial x}, \frac{\partial \psi}{\partial y} \right) = (U, V)$$



$$G\{[x, y, z] \in E_3 \mid \sin z = \frac{z-1}{e^{2x+1}}, z \in [0, 1]\}$$



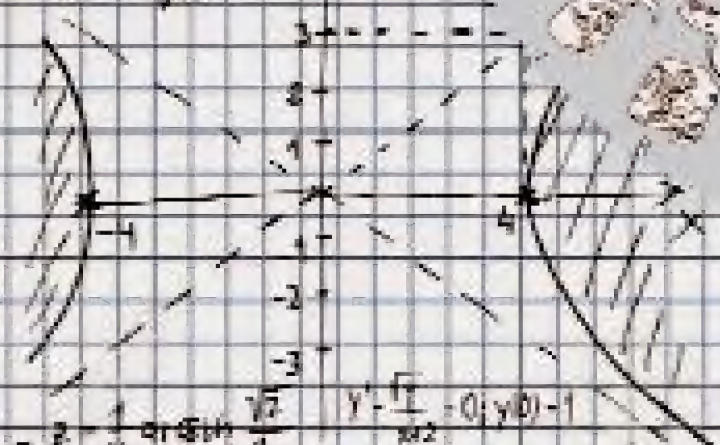
$$\mathcal{G} = g_{\text{rad}}(A) = (F'_x(A), F'_y(A), F'_z(A))$$



$$f(x) \geq 0$$

$$x^2 + x^2 + y^2 + z^2 \leq x + y + z$$

$$R_0 = \frac{\sqrt{1000}}{3\sqrt{\pi}} \approx \frac{10}{3\sqrt{\pi}} \approx \frac{7}{16}$$



$$e^2 - xyz = e, A[0, e, 1]$$

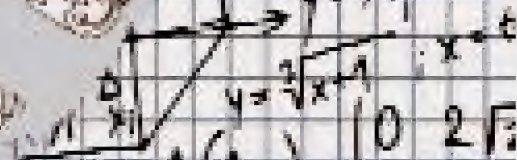


$$\Delta A = \begin{vmatrix} \frac{\partial^2 F}{\partial x^2}(A) & \frac{\partial^2 F}{\partial x \partial y}(A) \\ \frac{\partial^2 F}{\partial y \partial x}(A) & \frac{\partial^2 F}{\partial y^2}(A) \end{vmatrix}$$

$$\overline{y^2} = 2 \sum_{i=1}^n (A_i x_i)$$

$$m_i = \int (x_i) dx_i dy_i dz_i$$

$$\frac{\partial f}{\partial x_i}(A) z$$

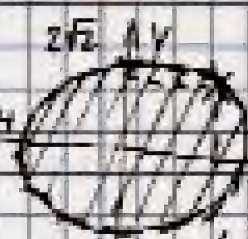


$$\Delta(A_z) = \begin{vmatrix} 0 & 2\sqrt{2} \\ 2\sqrt{2} & 0 \end{vmatrix}$$

$$J(A) = \sqrt{0.16}$$

$$\frac{\partial^2}{\partial x^2} = 2, \frac{\partial^2}{\partial y^2} = 2$$

$$x^2 + y^2 + z^2 \leq 1$$

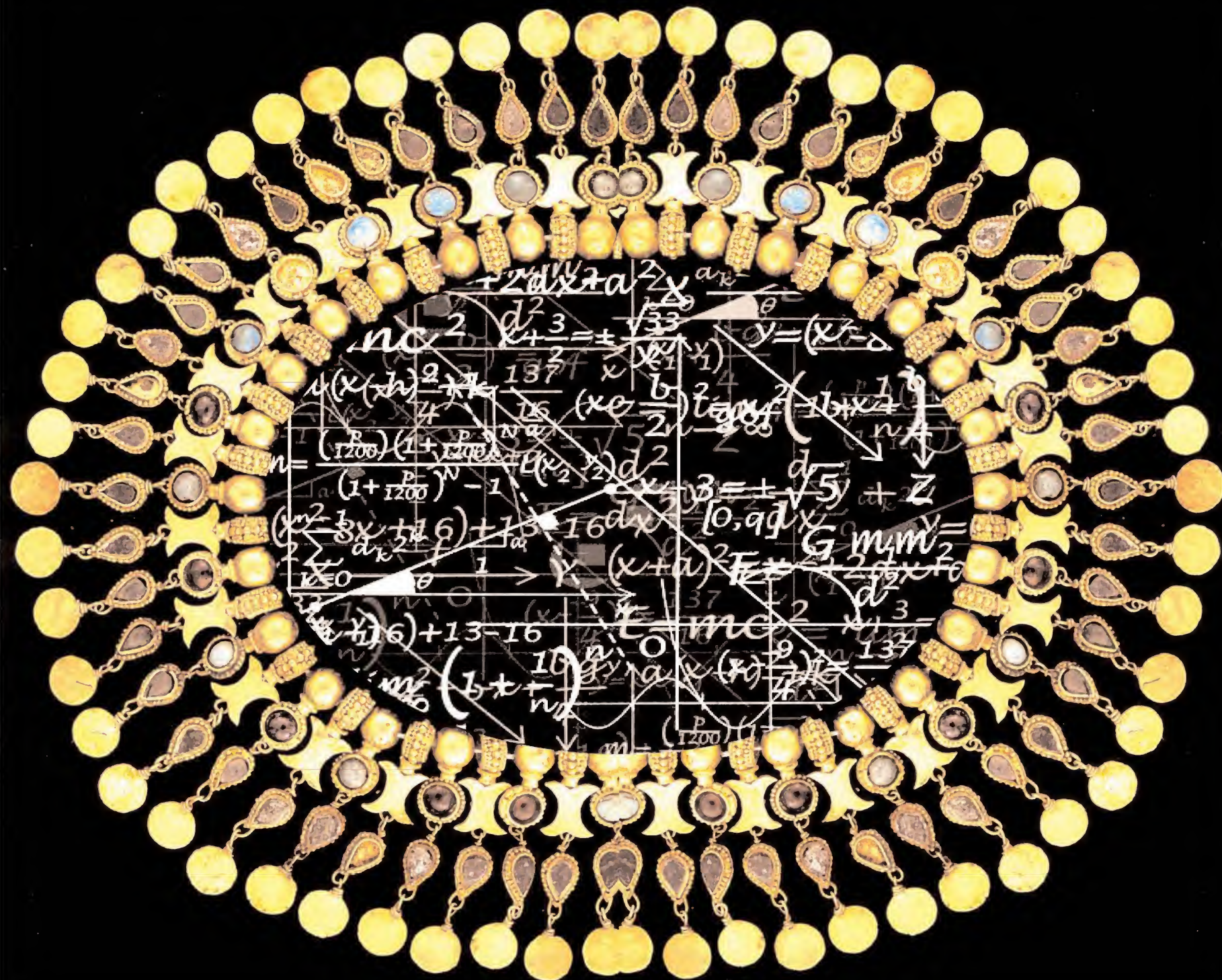


$$\frac{x^2}{16} + \frac{y^2}{8} \leq 1$$



$$A, B, C \in \mathbb{C}$$






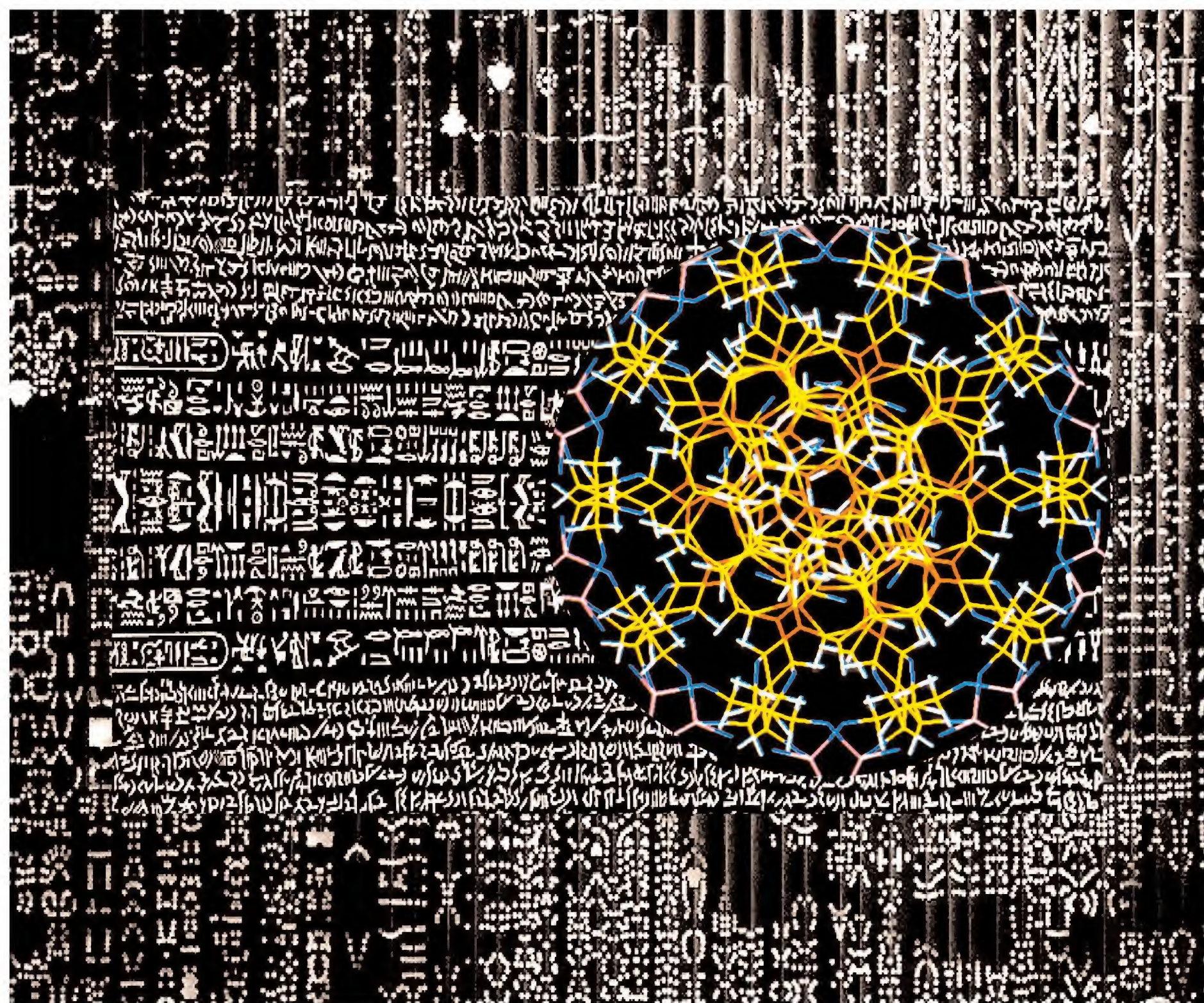
$$-\frac{\hbar^2}{2m} \nabla^2 \psi(\mathbf{r}) + V(\mathbf{r})\psi(\mathbf{r}) = E \psi(\mathbf{r})$$

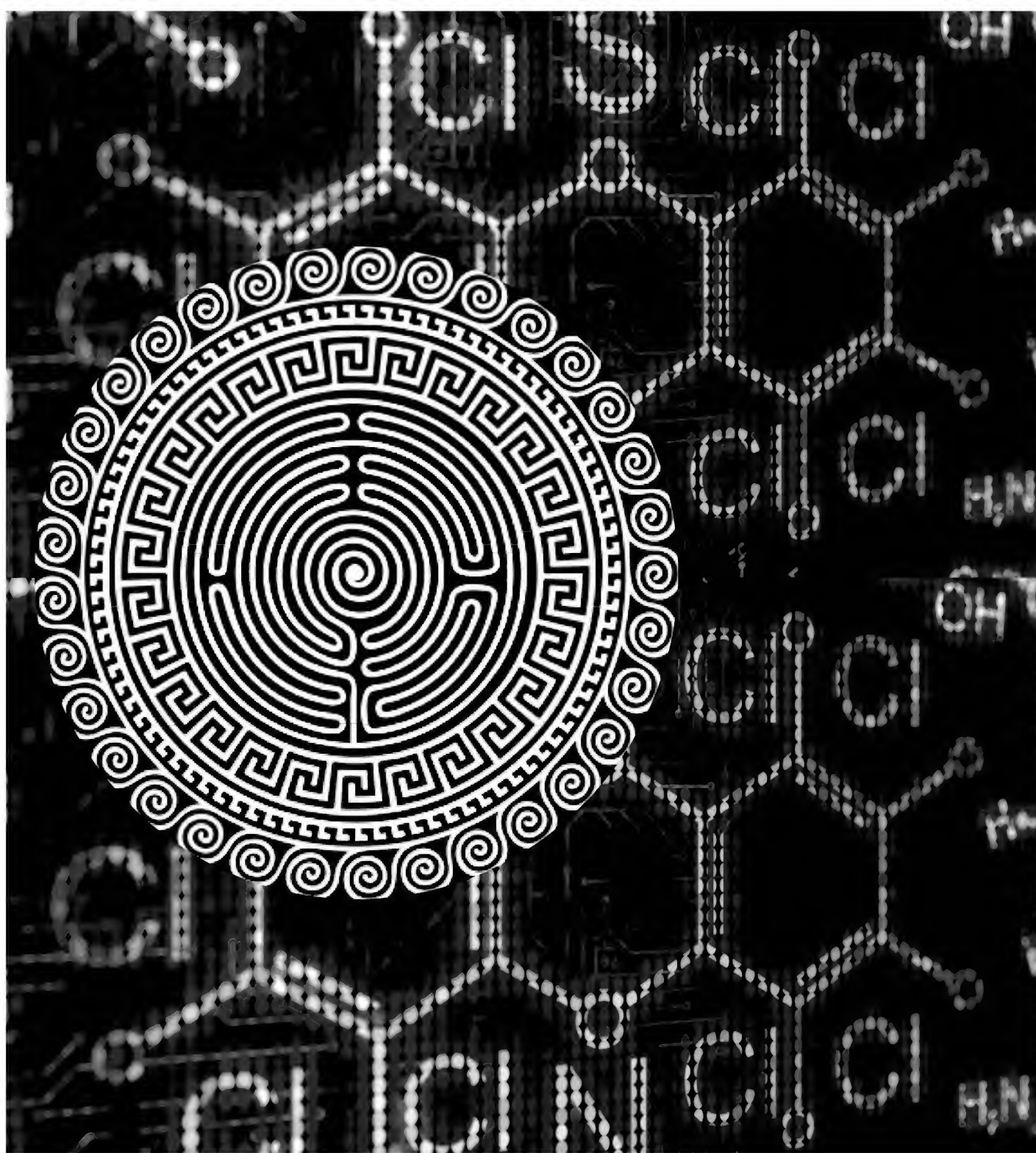
$$\left(\frac{-\hbar^2}{2m} \nabla^2 + V \right) \psi = i\hbar \frac{\partial \psi}{\partial t}$$

$$\Delta x_i \Delta p_i \geq \frac{\hbar}{2}$$

$$\left(3mc^2 + \sum_{k=1}^3 \alpha_k p_k c \right) \psi(\mathbf{x}, t) = i\hbar \frac{\partial \psi(\mathbf{x}, t)}{\partial t}$$

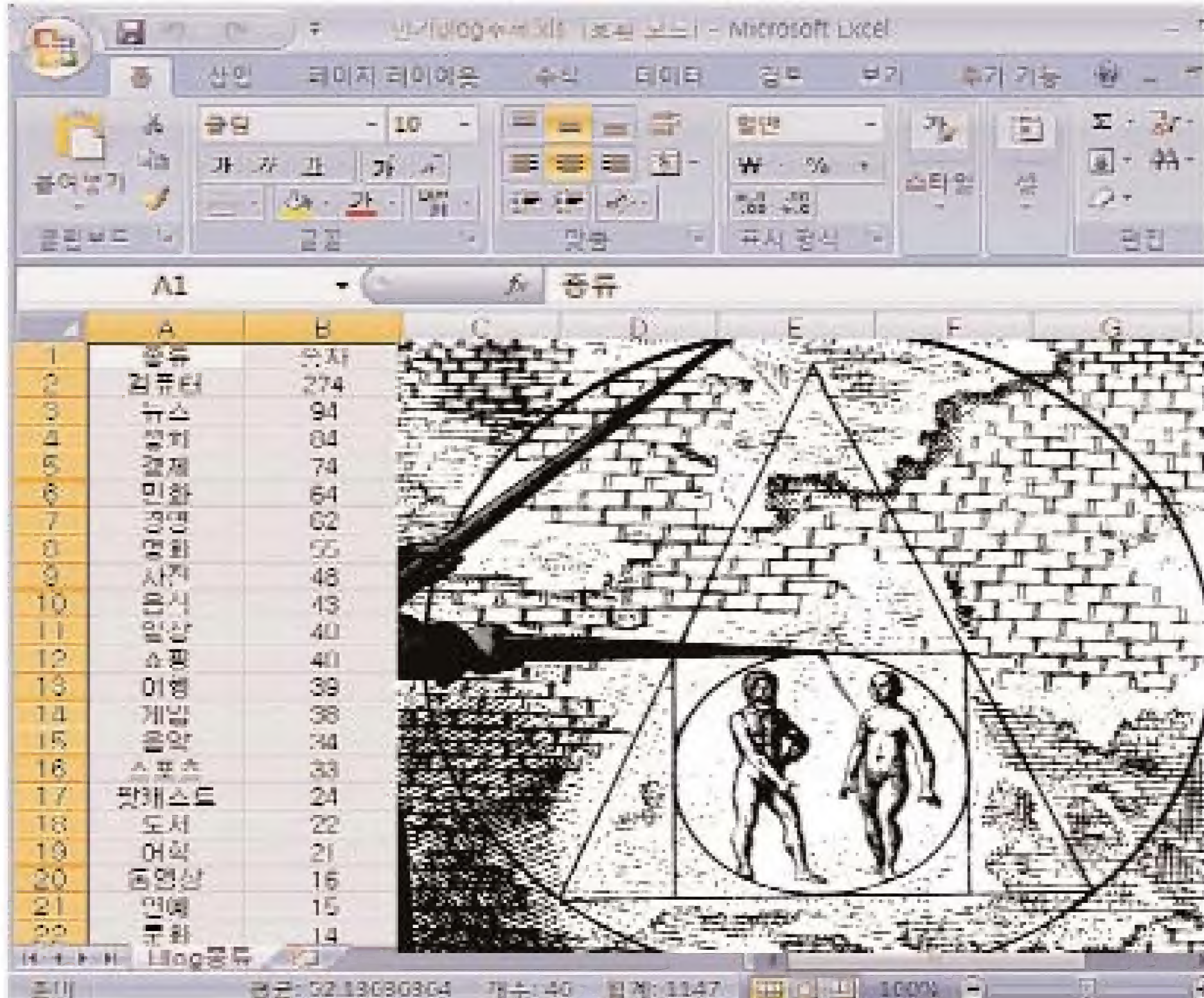

$$i\hbar \frac{\partial \psi}{\partial t} = \frac{\hbar c}{i} \left(\sum_i \alpha_i \frac{\partial \psi}{\partial x_i} \right) + \alpha_4 mc^2 \psi$$






```
netalx16 ip/secrets.txt
netalx16 ip/secrets.txt
Hello World
I have a
I like t
and I Love Linux...a
netalx16 0@mybox /tmp
ercrets.txt
enter a
/verifyin
netalx16
msg.txt
netalx16
J2FsdGVhbnQ=
bgJEoI7F
b4rZuOKL
netalx16
```





HOPR Y N B R F R H O H R P Y

የጥቅም ላይ የዋለው የሰነድ ቁጥር

[illegible]

Handwritten: $H \oplus P R \cup Y \cup \{b, c\} \cdot R \cdot \neq B \cup \{c\} \cdot H R \cup Y$

[illegible]

* የታሪክ ምዕራፍ: የሃይማኖት ምዕራፍ

001PR1Y1316R:FBH0:AR1Y1

የጥቅም ሲሆን ለሌሎች ጥቅም ላይ ሊውል ይችላል፡፡

* የታሪክ ምዕራፍ: የግልጽ ምዕራፍ

HOPRHYKIB: RFBH: HRPY.

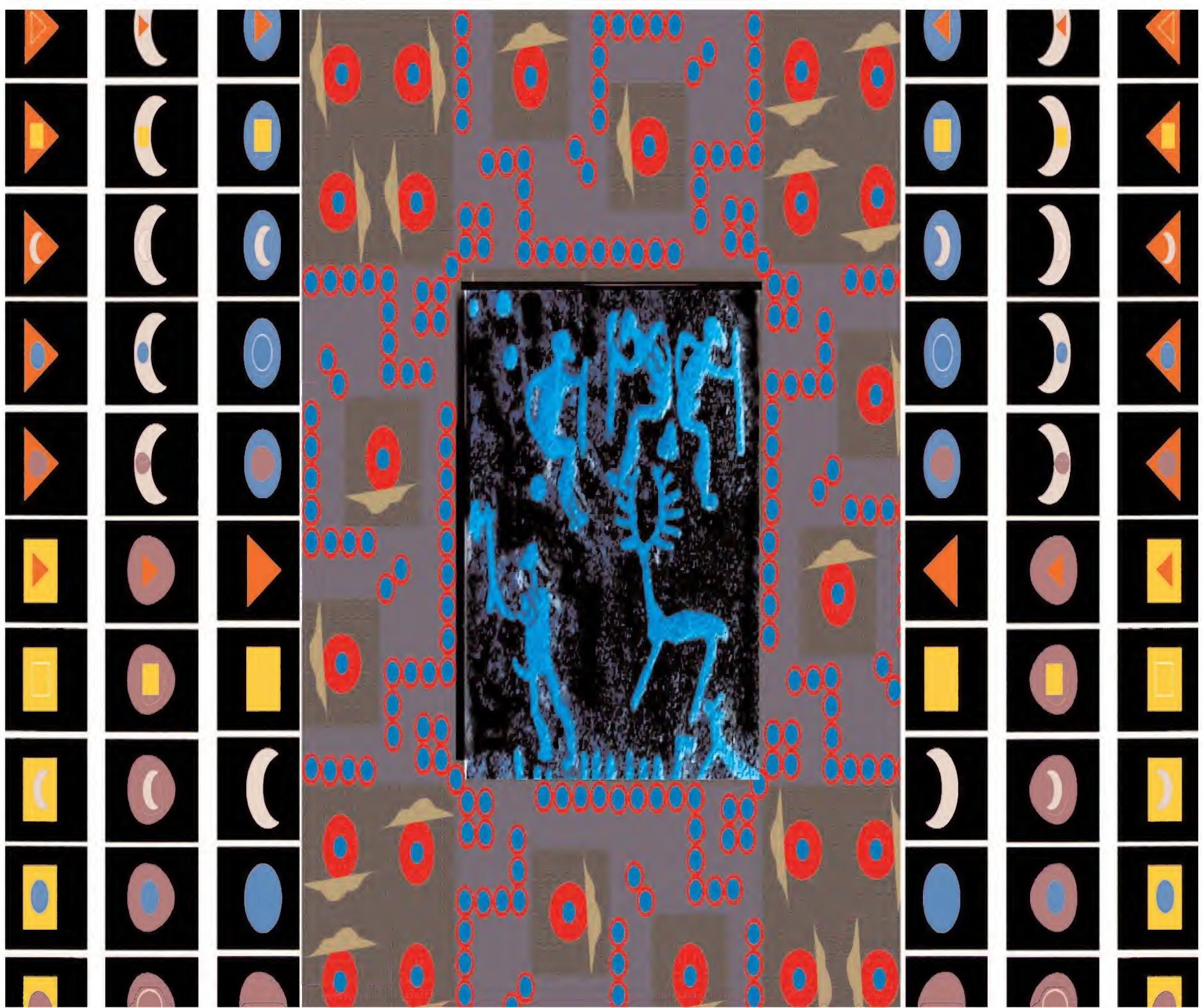
የጥቅም ሰነድ ቅጽ 1

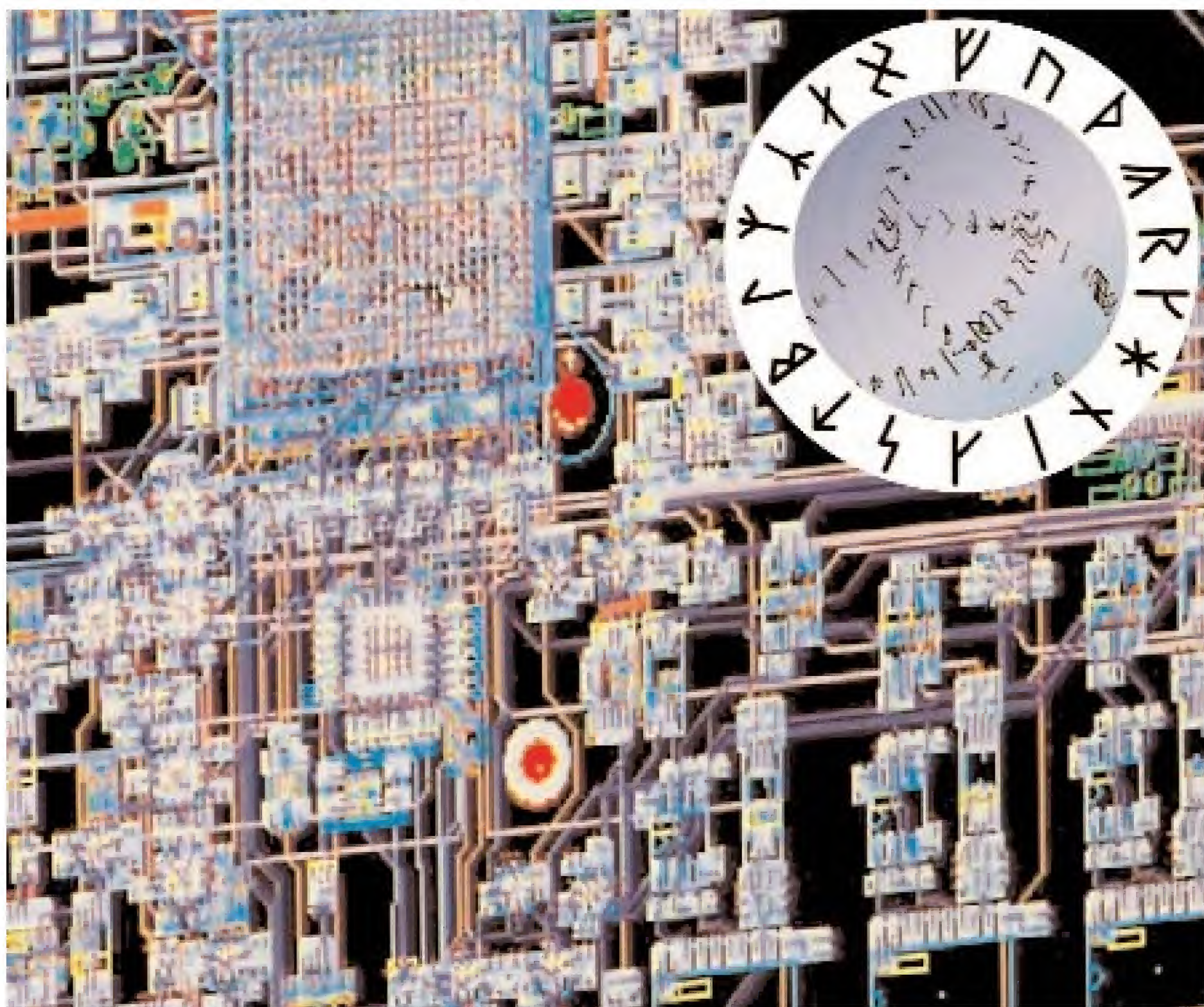
* 171. 181. 191. 201. 211. 221. 231. 241. 251. 261. 271. 281. 291. 301. 311. 321. 331. 341. 351. 361. 371. 381. 391. 401. 411. 421. 431. 441. 451. 461. 471. 481. 491. 501. 511. 521. 531. 541. 551. 561. 571. 581. 591. 601. 611. 621. 631. 641. 651. 661. 671. 681. 691. 701. 711. 721. 731. 741. 751. 761. 771. 781. 791. 801. 811. 821. 831. 841. 851. 861. 871. 881. 891. 901. 911. 921. 931. 941. 951. 961. 971. 981. 991. 1001. 1011. 1021. 1031. 1041. 1051. 1061. 1071. 1081. 1091. 1101. 1111. 1121. 1131. 1141. 1151. 1161. 1171. 1181. 1191. 1201. 1211. 1221. 1231. 1241. 1251. 1261. 1271. 1281. 1291. 1301. 1311. 1321. 1331. 1341. 1351. 1361. 1371. 1381. 1391. 1401. 1411. 1421. 1431. 1441. 1451. 1461. 1471. 1481. 1491. 1501. 1511. 1521. 1531. 1541. 1551. 1561. 1571. 1581. 1591. 1601. 1611. 1621. 1631. 1641. 1651. 1661. 1671. 1681. 1691. 1701. 1711. 1721. 1731. 1741. 1751. 1761. 1771. 1781. 1791. 1801. 1811. 1821. 1831. 1841. 1851. 1861. 1871. 1881. 1891. 1901. 1911. 1921. 1931. 1941. 1951. 1961. 1971. 1981. 1991. 2001. 2011. 2021. 2031. 2041. 2051. 2061. 2071. 2081. 2091. 2101. 2111. 2121. 2131. 2141. 2151. 2161. 2171. 2181. 2191. 2201. 2211. 2221. 2231. 2241. 2251. 2261. 2271. 2281. 2291. 2301. 2311. 2321. 2331. 2341. 2351. 2361. 2371. 2381. 2391. 2401. 2411. 2421. 2431. 2441. 2451. 2461. 2471. 2481. 2491. 2501. 2511. 2521. 2531. 2541. 2551. 2561. 2571. 2581. 2591. 2601. 2611. 2621. 2631. 2641. 2651. 2661. 2671. 2681. 2691. 2701. 2711. 2721. 2731. 2741. 2751. 2761. 2771. 2781. 2791. 2801. 2811. 2821. 2831. 2841. 2851. 2861. 2871. 2881. 2891. 2901. 2911. 2921. 2931. 2941. 2951. 2961. 2971. 2981. 2991. 3001. 3011. 3021. 3031. 3041. 3051. 3061. 3071. 3081. 3091. 3101. 3111. 3121. 3131. 3141. 3151. 3161. 3171. 3181. 3191. 3201. 3211. 3221. 3231. 3241. 3251. 3261. 3271. 3281. 3291. 3301. 3311. 3321. 3331. 3341. 3351. 3361. 3371. 3381. 3391. 3401. 3411. 3421. 3431. 3441. 3451. 3461. 3471. 3481. 3491. 3501. 3511. 3521. 3531. 3541. 3551. 3561. 3571. 3581. 3591. 3601. 3611. 3621. 3631. 3641. 3651. 3661. 3671. 3681. 3691. 3701. 3711. 3721. 3731. 3741. 3751. 3761. 3771. 3781. 3791. 3801. 3811. 3821. 3831. 3841. 3851. 3861. 3871. 3881. 3891. 3901. 3911. 3921. 3931. 3941. 3951. 3961. 3971. 3981. 3991. 4001. 4011. 4021. 4031. 4041. 4051. 4061. 4071. 4081. 4091. 4101. 4111. 4121. 4131. 4141. 4151. 4161. 4171. 4181. 4191. 4201. 4211. 4221. 4231. 4241. 4251. 4261. 4271. 4281. 4291. 4301. 4311. 4321. 4331. 4341. 4351. 4361. 4371. 4381. 4391. 4401. 4411. 4421. 4431. 4441. 4451. 4461. 4471. 4481. 4491. 4501. 4511. 4521. 4531. 4541. 4551. 4561. 4571. 4581. 4591. 4601. 4611. 4621. 4631. 4641. 4651. 4661. 4671. 4681. 4691. 4701. 4711. 4721. 4731. 4741. 4751. 4761. 4771. 4781. 4791. 4801. 4811. 4821. 4831. 4841. 4851. 4861. 4871. 4881. 4891. 4901. 4911. 4921. 4931. 4941. 4951. 4961. 4971. 4981. 4991. 5001. 5011. 5021. 5031. 5041. 5051. 5061. 5071. 5081. 5091. 5101. 5111. 5121. 5131. 5141. 5151. 5161. 5171. 5181. 5191. 5201. 5211. 5221. 5231. 5241. 5251. 5261. 5271. 5281. 5291. 5301. 5311. 5321. 5331. 5341. 5351. 5361. 5371. 5381. 5391. 5401. 5411. 5421. 5431. 5441. 5451. 5461. 5471. 5481. 5491. 5501. 5511. 5521. 5531. 5541. 5551. 5561. 5571. 5581. 5591. 5601. 5611. 5621. 5631. 5641. 5651. 5661. 5671. 5681. 5691. 5701. 5711. 5721. 5731. 5741. 5751. 5761. 5771. 5781. 5791. 5801. 5811. 5821. 5831. 5841. 5851. 5861. 5871. 5881. 5891. 5901. 5911. 5921. 5931. 5941. 5951. 5961. 5971. 5981. 5991. 6001. 6011. 6021. 6031. 6041. 6051. 6061. 6071. 6081. 6091. 6101. 6111. 6121. 6131. 6141. 6151. 6161. 6171. 6181. 6191. 6201. 6211. 6221. 6231. 6241. 6251. 6261. 6271. 6281. 6291. 6301. 6311. 6321. 6331. 6341. 6351. 6361. 6371. 6381. 6391. 6401. 6411. 6421. 6431. 6441. 6451. 6461. 6471. 6481. 6491. 6501. 6511. 6521. 6531. 6541. 6551. 6561. 6571. 6581. 6591. 6601. 6611. 6621. 6631. 6641. 6651. 6661. 6671. 6681. 6691. 6701. 6711. 6721. 6731. 6741. 6751. 6761. 6771. 6781. 6791. 6801. 6811. 6821. 6831. 6841. 6851. 6861. 6871. 6881. 6891. 6901. 6911. 6921. 6931. 6941. 6951. 6961. 6971. 6981. 6991. 7001. 7011. 7021. 7031. 7041. 7051. 7061. 7071. 7081. 7091. 7101. 7111. 7121.

APR 11 1964

15 3 341 RIBL 21K1 5 5 512 7M1: 7A RIR-Y1 Y19

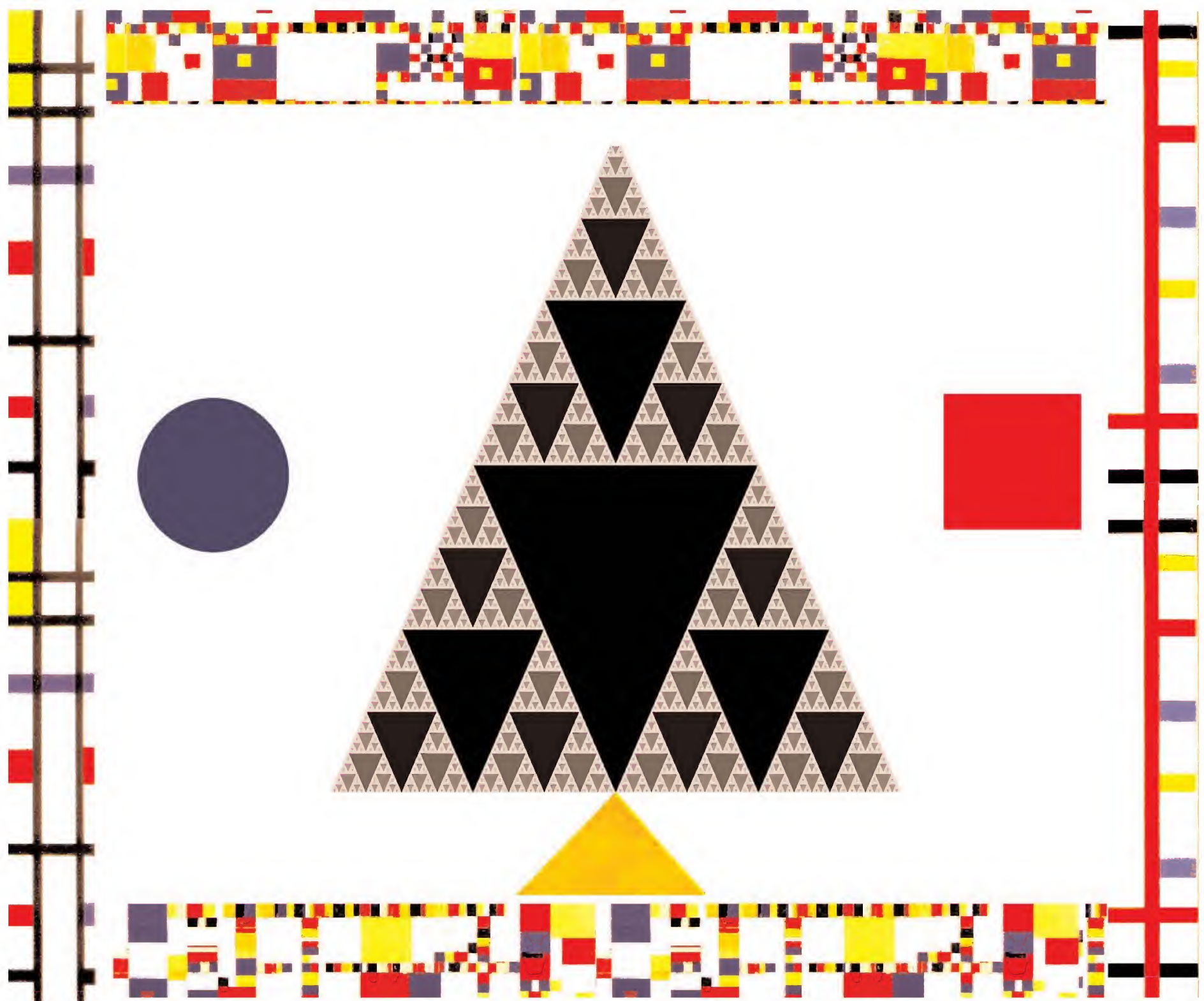
* የታሪክ ምዕራፍ ስም











Classical Physics

Space & Time, Large Distances
Newtonian Mechanics
Relativity
Thermodynamics
Electromagnetism
Optics

Modern Physics

Full Space, Small Dist.
Relativity
Atomic Physics
Nuclear Physics
Electronics

S.I. units

Mass - kg
Time - seconds
Distance - meter
 $\frac{1}{\text{sec}^2}$ or $\frac{1}{\text{s}^2}$ Derived units

Kinematics - the study of the motion with regard to its objects

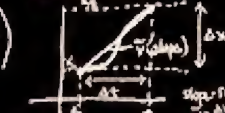
Position

Displacement (Δx)
 $\Delta x = x_{\text{final}} - x_{\text{initial}}$
 x = position

Velocity - the speed of an object and the direction the object is moving

Velocity (m/s)
 $V = \frac{\Delta x}{\Delta t}$
average velocity equals the change in position over the change in time
instantaneous velocity $V = \lim_{\Delta t \rightarrow 0} \frac{\Delta x}{\Delta t}$

Position vs Time

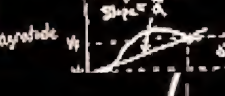


The slope of a straight line against two points on a position versus time graph is the average velocity between those two points.

Acceleration

Acceleration (m/s^2)
Average acceleration equals change in velocity over the change in time
Acceleration has both a magnitude and a direction.

Velocity vs. Time



Use arrows to indicate direction.
- arrow points same direction the speed is constant.
- arrow points in the opposite direction 1°

Acceleration equals zero if the average velocity and the instantaneous velocity are the same.



$$\frac{1}{\text{kg}} = 1.60934 \times 10^{-3} \text{ m/s}^2$$

$$\sin(\theta) = \frac{A_y}{A} = \frac{A_y}{A \cos(\theta)}$$

Inverse Tangent

$$\theta = \tan^{-1}\left(\frac{A_y}{A_x}\right)$$

3rd Law

- If object #1 exerts a force on object #2, then object #2 exerts a force on object #1 that is equal in magnitude and opposite in direction.
- For every action there is an equal and opposite reaction.
- Both forces should not be included on the same free-body diagram.

Rules of Projectile Motion

- The x- and y- directions of motion can be treated independently.
- The x- direction is uniform, with $a_x = 0$.
- The y- direction is free fall, $a_y = -g$.
- The initial velocity can be broken down into its x- and y- components.
- (x- Direction) $a_x = 0$
 $V_{0x} = V_0 \cos \theta = V_x = \text{constant}$
 $x = V_{0x} t = \text{distance along the x-axis (assuming } x_0 = 0)$
This is the only equation for the x- direction, since there is no horizontal velocity or acceleration.
- (y- Direction) $a_y = -g$
 $V_{0y} = V_0 \sin \theta$ (free fall problem)
positive direction is upward, uniformly accelerated motion, so the motion equations still hold.

Free-body diagram

